

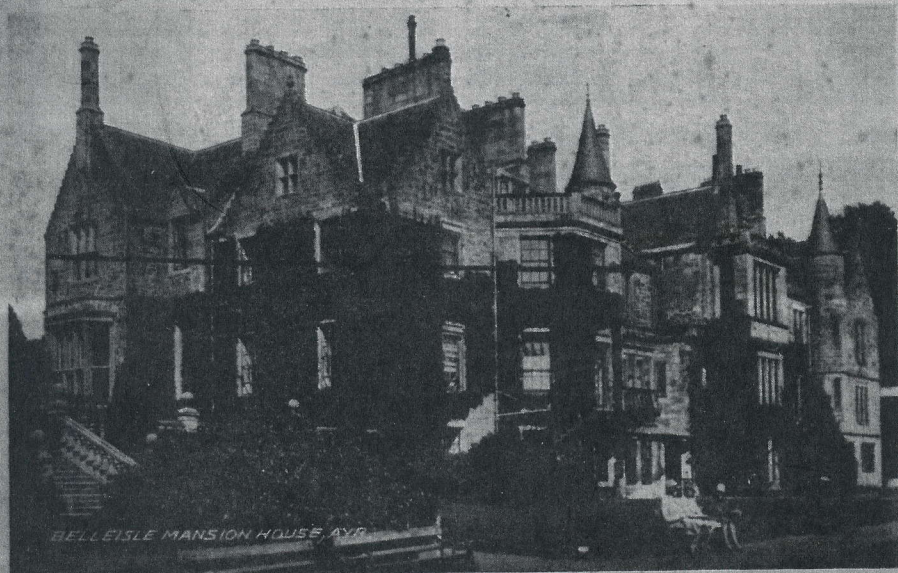
# ALEXANDER COLLECTION

AYR

*"Wham ne'er a toon surpasses"  
For gems o' nature, Burns, an' lovely lasses*

By

A. S. ALEXANDER, M.A., F.G.S.E.



Photo

A. D. Henderson, Maybole

BELLEISLE MANSION, AYR

Line Marks 8 Rooms of Alexander Collection

1926-1933

To  
John H. B. Lockhead, M.C., M.A., F.L.S.E.  
with best wishes and pleasant memories  
of a Silver Jubilee of fine friendship.

This is the first copy issued of this booklet.  
THE ALEXANDER COLLECTION  
AYR

A. S. A.  
24/5/35.



# THE ALEXANDER COLLECTION

AYR

BY  
A. S. ALEXANDER  
M.A., F.G.S.E.

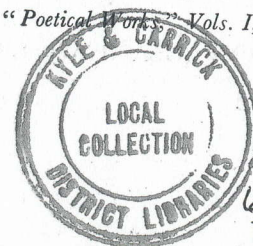


JOHN SMITH AND SON (GLASGOW) LTD.

1935



SIR WILLIAM ALEXANDER, EARL OF STIRLING, IN 1624, AGE 57  
"Poetical Works" Vols. I, II, in Ayr Carnegie Library



672  
22

560  
- 941  
(ALE)

## INTRODUCTORY NOTES

ALEXANDER is Greek "*Helper*."

A noted Scottish Alexander of old time was Sir William, Earl of Stirling, descended from the Lord of the Isles. Alexander, third son of Lord John of the Isles, got a grant of the lands of Menstrie, near Stirling, from the Argyll family, and his descendants adopted the Christian name as surname.

William was the sixth in descent from him, and was born about 1567 in the manor house of the Alexanders, still standing in Menstrie village. He was educated at the Grammar School at Stirling, and the universities of Glasgow and Leyden. He wrote the four tragedies of "Darius," "Croesus," "Alexandrian Tragedy," "Julius Cæsar," and other poetical works; and became Courtier, Secretary of Scotland, Printer to H.M. James VI and I, Coloniser of Nova Scotia or New Scotland, knighted in 1609, and later Earl of Stirling. He built Argyll House, one of the sights of Stirling. He died in London on the 12th February 1640; and his embalmed body was borne by sea to Stirling, and interred there on 12th April. "In many-sidedness and strenuousness of character he stood high above any contemporary. His two eldest sons dying of fever within twelve months of each other, his titles and debts, amounting to 'thirty-two thousand pounds sterling,' were inherited by an infant grandson, 'and the titles lapsed in the fifth generation'"—probably by my grandfather, Patrick.

A. S. A., Ayr.

*Quin* on Alexander's marriage to Janet, daughter of Sir William Erskine.  
1603:

"Loe! heere a youth of yongmen paragone,  
Loe! there a nympe the honour of her sex,  
Most comely shape and feature doth adorne,  
Both with proportion like, and symmetrye,  
With manners like, and virtues sympathie  
As hee, so she is gentle, wise, and chaste."

*R. Hayman*, Newfoundland:

"Great Alexander wept and made sad mone  
Because there was but one world to be wonne;  
It joyes my heart, when such wise men as you  
Conquer new worlds, which that youth never knew.  
Wisely our King did aide on you bestow  
Wise are all kings who all their gifts give so,  
Old Scotland you made happy by your birth,  
New Scotland you will make a happy earth."

*William Drummond*: "Menstre, astre des escossois."

*Alexander's last verse* of "Julius Cæsar" tragedy:

"Then let us live, since all things change below,  
When raised most high, as those who once may fall,  
And hold when by disasters brought more low  
The mind still free, whatever else be thrall:  
Those (Lords of Fortune) sweeten every state,  
Who can command themselves though not their fate."

## "SCOTLAND'S FIRST COLONY"

Scotland's first attempt at colonisation, planned by Sir William Alexander in 1621, was made in 1628; when four vessels were fitted out and carried over seventy colonists, including two women; under the command of his son. On the advice of Sir David Baird, a "tough old sea-dog," they made for Port-Royal, now Annapolis, Bay of Fundy, Nova Scotia, and settled there. This was a French settlement that had been destroyed a few years before by the New Englanders.

During the first winter its numbers were depleted by scurvy, Indian, and French attacks, but thereafter they made steady progress. When success seemed assured, the little colony was overthrown by Charles I, in secret agreement with the King of France, abandoning all claims to territory north of New England. Thus betrayed by their King, the Scots were scattered; and next year the King gave "poor consolation" by making Sir William, the originator of the scheme, Earl of Stirling and Viscount of Canada.

*Last lines of Vol. II* of his Poetical Works:

"We may compare the erthis glory to a floure,  
That flurische and faideth in an houre,  
Quhat are we bot a puff of braith,  
Quho live assur'd of nothing bot of deth.  
Finis quod William Alexander of Menstry."

## PROFESSOR L. E. KASTNER'S LETTER

THE VICTORIA,  
UNIVERSITY OF MANCHESTER,  
1st Sept. 1934.

DEAR SIR,

I wish to thank you cordially for sending me a copy of your *Tramps Across Watersheds*, which I have read with much pleasure and profit; and also for your portrait. I have compared the latter with the portrait of Sir William Alexander which appears as a frontispiece to our edition of the Earl's Works. Both my wife and myself find there is a striking resemblance between the two portraits.

As for the portrait of Sir William there is no copyright, and you are therefore entitled to make what use you think fit of it. It would certainly be interesting for readers to be given the opportunity of comparing the two photos.

Believe me,

Sincerely yours,

L. E. KASTNER.



A. S. ALEXANDER, IN 1934, AGE 74  
*The Author "Resembling" the Earl*



A. S. ALEXANDER, IN 1932, AGE 72  
*The Author at home*

## PREFACE

I HAVE aimed herein at indicating the better means and methods of educating mankind and developing a "sana mens in corpore sano"—healthy mind in healthy body—so that a stronger and better race of men and women may result.

A. S. ALEXANDER.

AYR,  
*April* 1935.

## CALL TO THINGS

FEED not, ye folk, on windy wordy lear,  
Museums, gardens, have material fare—  
The rock, the plant, the animal are there.  
Imprint the thing with steady patient stare.

The thing in mind, the words anent may then  
Be read aloud and impressed well with pen.  
Thus, slowly stored with facts, not fictions, full,  
The mind will wisely grow and wisely rule.

The books you buy be best and friends indeed.  
Read well aloud, and think on what you read.  
Waste not the day with chaff or empty shell,  
For time is precious while on earth you dwell.

Put hands to plough or spade in open air,  
Producing fruit and food for human fare.  
Thus belly, body, brain develop then,  
And raise an A1 race of splendid men.

Dear Mother Nature, rich in every store,  
Her glories spread ye'll treasure more and more.  
Thus lives enriched enriching ever be,  
And blessing others through eternity.

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## A.—MY EDUCATION

Looking back over fully fifty years' experience of schools, academies, university, and all connected therewith, I have been more and more impressed with the appalling unnaturalness and waste of much of the work therein.

As I was born, one of ten, of a model mother and sensible farmer in the country, and reared in the usual Scottish way on plain fare and with much manual work in garden and field, I built up a big, healthy body; and graduated in Arts in my twenty-first year—crammed with language and literature in the usual way, but scientifically ignorant of common rocks, plants, and animals of my native land. I hated the schools and university, and the whole life attendant; and longed for life in fields and knowledge of nature. However, I worked hard, and did my duty so far as cramming required, and later in cramming others in the same universal way and per order of "My Lords and Co."—the "vicious circle."

### PET LARK.

I loved nature and the skylark which I reared as a pet and fed with flies from the tip of my tongue. In memory I see the cage yet with the piece of moor turf therein, and the lark sitting with its feathers all raised that last cold night, and chirping to get out. I set the cage on the kitchen table near the oil lamp for warmth but yet it chirped to get out. I opened the cage door. It stepped on to my finger, walked up my right arm, and placed its body close to my neck for warmth. I sat still in front of the blazing fire, and learned my lessons. Then I wondered what to do, and felt sorry to disturb the wee pet. However, I had to bed. So I put up my left hand to raise it but it wriggled to remain. I carefully unfastened its long claws, and placed it within the cage, and closed the door.

It was found dead on the cage floor on the morrow, and was buried in the garden with great grief.

### DAISY FLORET.

As I hurried down a brae one fine spring morning, I happened to pull out of my pocket a sixpenny booklet on the Daisy, by Dr. Andrew Wilson, Health Lecturer, Edinburgh. I looked at a diagram of an enlarged floret of the daisy and read details of its structure. "Is it possible that I am an M.A. and don't know the structure of the daisy?" I mentally soliloquised. I was taking a short cut on a path alongside of a bouldery dyke. "Do you know the story of one of these stones?" "I do not." A little lower down the brae, a bird with spots on its breast sat atop of a post in a wire fence and whistled: "How do you do?" "Are you a mavis or a missel thrush?" "I'm not sure."

A cold shiver passed down my spinal cord when I thought of my appalling ignorance of common things, the educational fraud, and absurdity of hurrying to teach pupil-teachers—cram with the same education—and torture tender youth with much nonsense and foul air. I grieved to think that a quarter of a century—the

formative period—had been largely wasted in learning what was of little use, and what Emerson had called: "A bag of wind, a memory of words." It was a lovely morning. The sun shone brightly on green Ochils, "Winding Devon," Carse of Stirling with Wallace's Monument, Stirling Castle, and the cone of Ben Lomond far west in the blue sky—my homeland—and I knew it not scientifically. That shock saddened and roused me to reality, as from a dream.

## TO KNOW SCOTLAND.

\* So I determined to know Scotland somewhat—rocks, plants, animals—practically by utilising the Royal Museum, Edinburgh, and the Botanic Garden there; to read systematically main authorities in natural history; to tramp over its watersheds; and to collect specimens.

"Where there's a will there's a way," they say, and so in due time it all came to pass during nearly fifty years of steady plodding. From that moment I became master of myself, self-reliant, free to do as I list in self-culture, without mere mercenary aim but of service to myself and others through real knowledge and understanding.

Equipped with a handbag holding my lunch and a notebook, a pencil in my pocket, and a penknife, I marched up the steps of the entrance stair of the Royal Museum, paused, and wondered where to begin my studies therein. My left eye caught sight of great mammals, and the great skeleton of a whale suspended in the mammal department. So I swung to the left and entered that hall of mammals—great and small.

"Where shall I begin?" "At the beginning," I told myself. "Where is that?" "The lowest type," for all are in order of development. "Here it is." "Where shall I begin to examine?" "At the beginning." "Where is that?" "At the tip of the nose," for all is in order, even the hairs, to the tip of the tail.

"Shall I look at the name first?" "No, see the thing first—the natural way." So I examined from tip to tip, slowly; and mentally photo'd—took a good exposure—the various forms and skeletal structures; and finally wrote in my notebook the name, habitat, and notes anent—all spoken aloud, so that eye, tongue, ear, and fingers might impress the whole on the brain. No haste but, like the tortoise, persistent, little by little, orderly, systematically. Thus hour by hour the objects were seen and known thoroughly, recorded, and the notes rewritten neatly in ink on return, for future reference and revision. I lunched, rested, and resumed until, like a bee, I was laden with first-hand knowledge, eyes trained to observe accurately, tongue to utter distinctly, ears to hear clearly, and brain to understand and memorise indelibly and logically. Truly, there is no royal road to knowledge of a lasting personal nature. Day by day I worked thus around the mammals, and ultimately reached the bimana and skeleton of man. The same method was applied in other departments, one after the other, until ultimately I began in the Geological Department, and Botanic Garden. Every year for several years I spent a month of holidays therein—the museum usually in forenoon and the garden in afternoon for change, mental relaxation, and variety.

Then at five o'clock in the morning a little alarm-clock rang on a little table at my bedside. On this table were arranged in order authorities on rock, plant, animal—Geological, Botanical, Zoological—and I gave twenty minutes' reading aloud, as Professor to student, to each book in turn, with interval of twenty minutes for mental rest and recuperation. Thus on till seven o'clock rang. Then in a basin of cold water I washed from toe to top, and rubbed red with towels, for physical exercise and increased circulation and purification. Thus lungs and skin were

exercised, and filled with pure air from a window open atop above the bed. Plain fare followed, a day full of labour, and physical and mental pleasure, so far as the traditional unnatural educational system would permit.

## NEW WINE IN OLD BOTTLES.

However, I had to be careful not to introduce much new wine into old bottles, new methods and ideas into well-rooted traditional ones. But I trusted to time, psychological opportunities that might occur, and the gradual enlightenment of those in authority. Pioneers are apt to be punished in some way or another for pushing ahead of their fellows, and interfering much with established customs and ideas. Thus on for years acquaintances with naturalists formed; collecting, mounting, and buying specimens; freely exhibiting privately and publicly; and explaining such to pupils, friends, and visitors when occasions occurred.

## POSTING A LETTER.

One quiet evening in the twilight, while teacher in Carlyle's old Academy at Annan, I stood at the post office pondering whether to pop therein a letter of application for the post of teacher of Geology, Advanced Physiology, and Higher English in Girvan High School. I liked the Annan locality, the Rector, the teachers, and the pupils, and had been praised for my teaching of Latin and French. But Girvan was noted geologically, and there was the prospect of teaching Natural Science, and an increase of salary. All Annan seemed asleep as I stood in deep thought, and then I popped the letter in.

Thirty-eight years have rolled away, and these have been associated with Ayrshire, especially Girvan and Ayr—its hills, vales, shore, and thousands of its human inhabitants, young and old, of every age and stage of development and education. How much depends on one little act by one human being for weal or woe! Of the students in Girvan Science class, one is Chief Instructor in Agriculture, Canterbury Education Board, New Zealand; one an Established Church minister; one a Doctor; one a Sea Captain; one a Chemist; one Head of a firm; one a Headmistress of a school; one an Art teacher; and others more or less distinguished in their several callings. However, "owing to a reconstruction of the Secondary Department" and doing away with this valuable science teaching, "my services were no longer required," to the deep regret of Provost MacCreath, an enlightened Chairman of Girvan School Board, who later pointed to the new High School when I last walked with him, saying: "Mr. Alexander, that is my monument."

## NATURAL HISTORY IN AYR.

A vacancy occurred in Ayr Academy, and I called on William Robertson, chairman of Ayr School Board, who knew the circumstances well, and I was appointed two hours later. I worked steadily on with nature studies, in addition to Academy duties, and lay low, knowing how much the Academy was in the control of the traditional education. I did my work as required, and for five years made little attempt to introduce natural education.

One spring morning the ardent Art Master, keenly alive to nature knowledge and natural education, said to me: "Mr. Alexander, I understand you are interested in Botany. I was indebted to Dr. Wilson, Botanist, St. Andrews, for valuable information in drawing plants. I should be grateful for any help you might give the advanced pupils anent." I replied that I should be delighted to help in any way therewith—without thinking how the superior might regard this action. This was the thin

## THE ALEXANDER COLLECTION

end of the wedge that led to exhibitions of mounted plants in the Academy at the end of the session; in the Carnegie Library hall; and, at the request of Miss Campbell of Ayr School Board, at the opening of Newton Park School, to which delegates to the Educational Congress held in Ayr were invited by the School Board.

I then volunteered to show and explain natural history specimens to teachers or others gratis, if the School Board would grant the use of a room in the evening in Ayr Academy. While thanking me for the offer, the Board replied that they would pay me the usual salary for evening teaching for thirty lectures in Geology and thirty in Botany, provided a dozen pupils enrolled in the class. This arrangement I accepted and for five years carried out to the satisfaction, I suppose, of those concerned. Thus Nature Knowledge in these sciences crept into the evening classes of Ayr Academy, probably for the first time. I was transferred to the Grammar School, and there carried specimens and gave instruction to various classes in Nature Knowledge. As I stayed near Wattfield Bowling Green, I was permitted by the bowlers to exhibit portions of my collection in the bowling-green house. Later I was granted permission to exhibit in the entrance hall of the Carnegie Library.

The late William Robertson, J.P., and the late Judge David Alec Wilson, Ayr, author of *Life of Carlyle*, called to discuss with me the disposal of my collection. The former offered to "write up" the collection to get a purchaser, and the latter had also for several years endeavoured to further its interests. Being apprised of their visit and purpose, I wrote in advance this letter to them and all others interested in the collection:—

8 WATTFIELD ROAD, AYR,  
6th December 1921.

I have long cherished the idea of having my collection suitably, though at first maybe humbly—in a building, say, of wood and corrugated iron or other material—exhibited in a building about the size of the Burns Museum at Alloway, and as near as possible to that museum—preferably at the southern end of Rozelle Wood, where the tramcar curves round to let passengers alight for Burns's Cottage and Museum.

This point appears to me to be near the apex of interest in Burns, Ayr, Ayrshire, and the beauties of Ayrshire in rock, plant, and animal.

My life's work and life's pleasures having been largely associated with Ayr shore and Ayr shire, I desire to have all Ayrshire reap the benefit of my life's effort, including all visitors from near and far interested in this most remarkable shire—geologically, botanically, ornithologically, and last, but not least, poetically. Though the above idea had been cherished for years, I dared not give vent to it till my object, so far as collecting was concerned, was sufficiently accomplished, lest I might be regarded as a mere dreamer.

The genesis of the idea of having something worth leaving behind helpful to Nature Study probably began as I trudged wearily home from spending a whole day alone, studying the individual plants in the "students' plot" that then existed and was so helpful in the Botanic Garden of Edinburgh—now fully forty years ago.

With increasing interest in Nature Knowledge, there should be no lack of specimens for filling all suitable and available buildings in the county of Ayr. I know several good private collections and collectors, and I doubt not there are many more not known to me, eager to help with specimens of natural objects, and probably gratis, for a little money is mere mockery to the true naturalist and life-long enthusiast for all his or her labour—as much so as an offer of a small sum to one's mother for all her pain and labour on one's behalf.

## EDUCATION

If there be due appreciation of the value of these specimens, then there should be sufficient accommodation therefor and at that most unique place at Alloway, where the late John Burroughs, the famous naturalist of America, heard the greatest volume of bird-song on earth.

I am,

Yours faithfully,

A. S. ALEXANDER.

When I had finished reading aloud that letter to our two friends there was profound silence and apparent deep thought by all for a time, as we three stood amid the collection. Ultimately Mr. Robertson said solemnly: "We will leave it to the future," and the subject was changed.

### ALEXANDER COLLECTION (BELLEISLE).

On my retirement, in 1925, I suffered from overwork and worry, producing my book, *Tramps Across Watersheds*, work with my collection, and sudden death of a brother, who could have aided my idea. In my weakness and fear of collapse I was eager to get a permanent public home in Ayr for the collection. I offered it to the Carnegie Library Trustees, but it was refused, there being no room for it. Soon thereafter Belleisle Estate was bought by Ayr Corporation, and I saw the possibility of it being lodged in Belleisle, so near to Alloway.

Thus, in my hour of physical weakness and suffering, I wrote this tempting offer: "As I have been about thirty years teacher in Ayr, I wish to offer Ayr Town Council the first opportunity of acquiring my collection of Natural History specimens. I ask nothing for the specimens. I ask £250 towards defraying the out-of-pocket expenses in preserving in dust-proof cases and cover-glasses." The offer was accepted, and the collection was to be known as the "Alexander Collection," as indicated in this letter from the Town Clerk, Ayr, dated 13th December 1926:

### NATURAL HISTORY COLLECTION

DEAR SIR,

In reply to the request contained in your letter of 8th November, I beg to say that the Town Council have pleasure in declaring that the collection is to be known as the "Alexander Collection."

Yours faithfully,

P. A. THOMSON,  
Town Clerk.

A. S. ALEXANDER, Esq.,  
8 WATTFIELD ROAD, AYR.

I was asked by the Burgh Surveyor if I would assist in the removal of the specimens to Belleisle. I answered: "Yes, free, gratis, and for nothing." So I placed, named, catalogued, gave information to visitors, and cared for the collection gratis until its removal therefrom.

The late Dean Highet was the first Ayr councillor to visit and congratulate me on completion of placing specimens. He, like Mr. Robertson, was my constant friend and generous well-wisher. His appreciations and congratulations being highly pleasing to me and encouraging, I formally thanked him per letter thus:

## THE ALEXANDER COLLECTION

8 WATTFIELD ROAD, AYR,  
19th June 1927.

DEAR MR. HIGHER,

I feel deeply grateful to you, the G.O.M. of Ayr and oldest Town Councillor, for your hearty expression of appreciation of the Alexander Collection and my work in setting in so appropriate a place, with such lovely environment, rendered dear by Burns to all lovers of Scotland, a country so rich in all natural things.

I may say my main aim, in making such and placing so, was *educational*—not mere passing evanescent show—the same I had in publishing *Tramps Across Watersheds*, so that true lovers of Scotland may know the land well and render more dear the blessing of being born and bred amid its beauties. I have also aimed at placing and naming so that all alike, both young and adult, may *educate themselves* therein by regular, little by little, systematic, personal application. Used thus, the collection should be a permanent asset to Ayr, Ayrshire, and myriad visitors from home and abroad to Burnsland.

It is *appropriately placed* in the very heart of Tam o' Shanter land, the scene of the world-famous ride. To retouch, reset this collection would likely tend to *spoil a good picture set in a good frame*.

Yours sincerely,

A. S. ALEXANDER.

I purposely kept a private visitors' book, so that the facts anent might be recorded and preserved for public use now and hereafter. In it are 2680 signatures of many notable persons, from fully thirty countries; sales of about 3000 catalogues, for which I handed per the "caretaker," who was responsible for their sales, £47, 12s. 8d. to the Treasurer of Ayr Corporation; sales of 1174 copies of my book, *Tramps Across Watersheds*, to 374 places, and recorded names, addresses, and dates of sales of the purchasers, whom I purposely selected as most capable of profiting by it. I had talks with every one of the purchasers, and explained and read portions prior to purchase. Thus 194 copies went to Glasgow, 24 to London, 48 to Edinburgh, 70 to Ayr, 19 to Prestwick, 21 to Paisley, 16 to Aberdeen, 14 to Kilmarnock, 12 to Troon, 8 to Hamilton, 8 to Rutherglen, 8 to Manchester, 7 to Perth, 7 to Dumfries, 7 to Leith, 6 to Barrhead, 6 to Bearsden, 6 to Cambuslang, 5 to Airdrie, 5 to New York, 5 to Renfrew, 5 to Strathaven, 4 to Selkirk, and so on over New Zealand, Australia, Sumatra, Java, Japan, China, Malaya, Burma, India, Ceylon, Syria, Egypt, Kenya, Natal, The Cape, Orange Free State, Rhodesia, Turkey, Italy, Portugal, Denmark, England, Wales, Northern Ireland, Irish Free State, Hawaii, Alaska, Canada, United States of America, Mexico, Honduras, West Indies, Venezuela, Brazil, Argentina, Iceland, Isle of Man, and Scotland, as far away as Shetland, Uist and Mull.

On Sundays of July and August, during five years, I stood at the top of the stair from 3 to 5 p.m. and directed two constant streams of visitors—one going up, the other down—who circulated "all round the eight rooms from left to right." The beautiful entrance hall, rest room, and catering rooms were equally crowded, while pianist and violinist played fine music to all the house. Sir Thomas Oliver said to me: "I have been all over the collection and congratulate you, sir, not only on the material but the order."

Dr. Dodds, once fellow-student of Sir John Murray of the *Challenger* Expedition, said: "You have every side of Nature represented here. This would make a fine university." However, the collection was dismantled, disordered, and removed in April 1933 to the Carnegie Library, the "Librarian and Burgh Surveyor will

## EDUCATION

take charge," I taking no part in its removal, not being officially asked and ill with a chill. The rooms were let to the caterer for £40 per annum, I understand.

CUCKOO (Belleisle).

To test visitors' knowledge of Nature, I placed a specimen of the cuckoo near the entrance to the main "Bird Room." I covered the label with my hand and asked: "What is that?" The usual reply was: "I don't know." I removed my hand and the visitor exclaimed: "The cuckoo! Dear me, I thought it was a small bird about the size of a sparrow or other." Hardly one person in a hundred could identify the bird, so useless is mere book knowledge, picture, or mere words without things.

Yes, things first, words second be the rule—the reverse is the wrong rule and fundamental weakness in education hitherto. Even in learning language, see the thing and then name, and words anent. Hence a child can speak its language before it can read it. Hence, though I was seven years learning to read Latin, I never could speak it properly. Only once was I forced to try to do so, to a Swiss student in an inn in Antwerp, who knew no English, but Latin and French. However, by using both, we managed to make ourselves mutually understood, but I fear an old Roman or modern Frenchman would have had sore sides with laughter at the modern products of the best schools and colleges of Britain, where the child's method is, or was, ignored in all things. Unless you become as little children you shall in no wise enter the kingdom of real knowledge.

### WRONG ROAD EDUCATIONAL.

In fact, reverse the present process of education and you will be more on the right road. Our old Scottish educational system and dominie were much on right lines until "My Lords and Co." from the "Greek Factory," as Emerson called Oxford, imported and imposed a mediæval, mechanical, muddling system on practical, sensible, hard-headed Scots, men and maidens, lads and lasses. Payment by results made education mercenary; led to roguery, shows and shams; demoralised "honest men and bonnie lasses"; lowered the sacred calling to quackery and less conscience. For half a century I witnessed the baneful results, too sad to contemplate and describe. We reap as we sow, and the harvest is a sorry crop, they say. There is too much concentrating in big, permanent, expensive, educational factories rather than inexpensive "tomato" nurseries; too many "bosses" with big salaries; too little trust to honour, honesty, conscience, common sense of individual teacher. Too much pulling up tender plants, examinations to measure results little measurable by man, and taking a lifetime to "Kythe," as my father called it, and fully fructify. Too much standardising, too little individualising, for all are different. Too much word work, unnecessary language, too little manual work, exact science, practical knowledge, and work in garden and field culture—"Adam's job." It is not "infra dig" to dig, and grow one's food. It is physically, mentally, morally, highly helpful to all, and produces a "sana mens in corpore sano"—a healthy mind in a healthy body—the chief aim of all natural education. No need then for much drill, excessive sport, big gymnasias, much music, dancing, doles for idlers. Not heedless, handless, heartless, but heady, handy, happy and content—

"For man needs little here below,  
Nor needs that little long."

## NATURE STUDY.

The only subject I was allowed to teach publicly, without examination, supervision, direction, and as I pleased, was "Nature Study," and only towards the close of my career as a teacher in schools. I followed no method but my own, which varied somewhat with the classes and conditions; never from a book, but always from things in view of pupils, and what they would naturally like to see and know. "What will the pupils like?" was my question to myself. Just as the fisher asks: "What fly or worm shall I use as bait?" on any particular occasion. So I selected the "bait," a variety of bait, for there was a variety of brains, but not many specimens at a time.

These objects I placed on a table in view of the pupils. Then I said: "Hands up those who have brought specimens—anything you like to show the class." "Place these on the table in order, first division first," and so on. "I shall deal with yours first, mine last." I then took up the first in order—no preferences—and looked at it as if I had never seen it before, and "an ignoramus," but eager to know—their mental condition. They knew, I didn't. I was Simple Simon, and asked questions at the owner, as "Where did you get this?" "At home. My father was a soldier in Egypt and got it there." "Egypt! What is that?" "A country." "Point to Egypt." "Is it a hot or cold country?" and so on. "But what is this?" "What is it made of?" "I don't know." "Hands up those who know?" I point to one to speak if several hands are up. "What is it made of?" "What is it used for?" and so on till Simple Simon and Co. were satisfied, and exhausted their knowledge thereon. Sometimes all I had to do was to sit on a chair and direct the eager speakers, and be Simple Simon ever. It was great sport educating Simple Simon, and many a hearty half hour was enjoyed by us all. Note: their eyes, tongues, ears, brains were used, and knowledge of every kind poured in a natural stream of native English into one common stock, in natural speech, manners, and general natural social family affair. I was their ignorant daddy, and they my wise sons and daughters. I out-led (e-ducated) them to the duck-pond of knowledge, and they swam in the common pool, gobbling what they liked in great variety.

## THE CUCKOO.

I might lift up a cuckoo, say, and ask a pupil to show the front towards the class for a time, and then the back. "Take plenty time, no hurry. Am going to ask someone to come up and tell us all he or she saw," I might say. Every eye was fixed on the specimen held steadily in front of all, and absolute silence for a time. "Turn the back now." Eyes again were fixed thereon, and absolute silence for a time. Then I pointed to one to come to the front and tell all he or she saw. "Where will you begin? Where is the beginning?" "At the bill." "Quite right." "How long is it?" "What like is its shape?" "Is it straight or curved?" "What is its colour?" "Is it one piece or more?" "What is its use?" "Has it teeth?" "What does it eat? I wonder." "Am not sure." "Hands up those who know," and so on, working to the tip of the tail and claw. "By the by, what is its name?" "I don't know." "It is cuc-koo." "How do you spell 'cuc'?" "How do you spell 'koo'?" —not 'kuk,' not 'ko'—funny word." "What does it cry?" "Its name." "Why does it cry?" "Not sure." "Hands up those who know." Then there may be various explanations suggested by pupils. I may explain—"The man cuckoo calling to the lady cuckoo, just as you cry to let your companion know where you are when playing 'Hide-and-Seek.'"

However, I had no uniform way of procedure, but varied according to circumstances and conditions of the moment. I ask nobody to do as I did, for all are different,

both pupils and teachers, and conditions, from moment to moment in living organisms, even dead things so called are changeable though less apparent the changes may be.

"Dare to be yourself," said Emerson, "and don't imitate." Be a man, a thinker, not a parrot, an imitator.

## STORIES.

"Now we will have a story! Composition books, pens and ink ready. Write about anything you like—don't mind me—what *you* like! *Anything!*" This was a surprise to a "new" class; and there was meditation meanwhile. I had led them to the duck-pond of ideas, and left them to sink or swim. In memory I see a girl sitting for nearly ten minutes without having written a word. She has a fresh, rosy face, leans on her left elbow and holds the end of her pen to her red lips; and the clear eyes look with a far-off gaze of wonder. I slip up to her and ask: "Not writing anything?" "No, sir, I do not know what to write about." "You come from the country?" "Yes, sir." "Is your father a farmer?" "Yes, sir." "No cows, no sheep, no pigs, no ducks, no dogs? Anything you like" (putting emphasis on each word). "Anything you like." I then walked away without waiting for a reply; for it was obvious there was a boundless field of subjects, and only one to choose, and the one she liked best. Soon down went the head and remained down, for she was writing steadily. Some time after I said to the class: "I don't want more than one page and a half of your composition book. When you come to a period—by the by, what like is it?" "A round dot." "Put it in and measure off a half-inch with ruler before beginning."

Exercises were gathered in on Friday afternoon. Every error surrounded with a blue circle and corrected on Saturday usually. I saw not only what was written, but the mind of the girl and its state, and likes. She revealed herself; and I had read much therein. I came to know her. I had diagnosed her, and knew what mental medicine and meat for her restoration and growth educational. So with all others. On Monday we returned the manuscripts with as many subjects as there were pupils, and all unknown except to the several authors and myself. However, I played the part of Simple Simon, "ignoramus," as if I had never seen or read the subjects. "Read over your stories, note your mistakes, be able to spell and tell errors, and I will ask you to come out to the line (a line drawn with chalk on the floor), spell and tell errors correctly."

On this occasion I asked the farm girl, who did not know what to write about, to come to the line and hold the book well up in the left hand. I sat down on the back form and said: "If anyone does not hear every word distinctly, hold up the right hand, and be able to repeat when asked the last sentence to show you are attending to every word." I asked the girl: "What is your subject?" "Death of a horse." All were eager to know the story. "Now, when you come to a period, put up your right hand, and I will count 'one, two' before you read the next sentence." I remember the story still.

"Tam, our servant man, came into the kitchen when father was at breakfast, to tell him that the three-year-old horse was awfully ill. Father sent him off for the vet. When the vet. arrived he hung the horse in canvas to the roof or ceiling of the stable and gave it a bottle full of medicine. Soon the sweat began to break out all over; and, some time after, the vet. said to father: 'The horse will not recover. I will go away home as I can do no more for it.' The horse died shortly afterwards, and father put it into a cart and sent Tam with it to the tanwork in Ayr." She poured forth ever after on paper.

When she read a word such as "awfully," "vet.," "canvas," "medicine," requiring spelling or information anent, it was immediately dealt with, and anyone might be asked to repeat the same to prove attention. Thus at various times during the week we gradually worked through stories, as a pleasure, a few at a time, and relaxation, for most were original or at least not copied from book or paper or other aid. One chose Lord Lytton's novel, *Pompeii*. She told the story without the book, bit by bit for weeks; to the delight and edification of her classmates, and poured forth a prime flow of good English. In a class of forty pupils there were forty rivulets of language and knowledge poured into the common pool. Thus indirectly they learned to address others, speak distinctly, and write neatly, correctly, naturally, originally, and delightfully to pupils, Simple Simon and all.

## RECITATION OR SONG.

Towards the end of the session there was a prize, a fine copy of the works of Robert Burns, offered by Ayr Burns Club, to each Ayr school for the best Recitation or Song of Burns. It was open to all the schools, and the competition was held about the end of June.

About the beginning of May I said to the class: "I want every pupil to get a copy of Burns's *Poems*, anywhere, anyhow, and any kind, but, as a joke, don't steal it. Look it all over, and select one poem—not too long, about five or six verses, say. Learn only four lines each week, and I will hear any pupil a fortnight hence, and every week until all are learnt. Choose any poem you like, and tell me whether you wish to recite or sing it." A fortnight later I made a list of the pupils, their poems, and to recite or sing. Thus forty or so pairs of eyes peered over Burns's *Poems* during a fortnight, and each pupil selected the poem he or she liked. Hence the variety of subjects and kinds of poems. The same procedure was adopted as in reading stories, and slow, thorough acquisition, originality, natural delivery, and reproduction with a great stream of Scottish language, sentiment, poetry, poured into the common pool, delightful to all, both pupils and Simple Simon. They got a good share of prizes during the years, but the best prize was not the books received but the pleasure and knowledge thereby. As a bit of variety, I would ask: "Any dancers in the class? Hands up those who know any." Names would be given. "Do your best. Anything you like." "Highland fling." "All right. Go on."

Same procedure with reading or other work. No imitation, sameness, uniformity, but diversity as their faces, forms, bodies, and brains. No monotony, no eye on reports, results, inspectors, bosses, prizes, profits pecuniary, or what any mortal would think or say anent. "It will a' kythe ae day" in the long last. Do one's best, duty, and leave the rest to time—"The mills of God grind slowly."

## BAG OF WIND.

In 1844 Emerson said: "We are students of words: we are shut up in schools and colleges for ten to fifteen years, and come out at last with a bag of wind, a memory of words, and do not know a thing. We cannot use our hands, or our legs, or our eyes, or our arms. The old English rule was 'All summer in the field, all winter in the study.' The ancient languages become stereotyped as education. As soon as the pupil leaves the university, as it is ludicrously styled, he shuts Greek and Latin books for the last time. But is not this absurd, that the whole liberal talent of this country should be directed in its best years on studies which lead to nothing?"

## MUSEUM WORK.

In 1928, a report on American Museum Work by E. E. Lowe, Ph.D., B.Sc., Director, City Museum and Libraries, Leicester, published by the Carnegie United Kingdom Trustees, states the general principles thus:

"(1) The schools and the museums should co-operate to enrich progressively the intellectual, cultural, and emotional life of the people.

"(2) Such enrichment will come to the individual as the result of experiences with nature at first hand, with works of art, with museum specimens, and with other original objects having human interest.

"(3) The schools should lead in placing emphasis on Nature study in the great outdoor museum, where everything is alive. To promote such activity, provision should be made for generous school gardens, for public parks within walking distance of every school building, and for free transportation to some observation area.

"(4) These primary experiences should be supplemented by contact with the material gathered in museums of science, art, history, and industry, whose contents should be placed freely at the service of the public schools.

"(5) The schools should make use of this material to the fullest possible extent.

"(6) To promote such mutual service, normal and teachers' colleges should train the students in observation and exposition, through excursions into the open and trips to the museums, and give them systematic training in using museum material.

"(7) The expenses of providing the materials required for observation and for circulating and keeping in proper condition the travelling materials should be shared between the museums and the boards of education upon some mutually satisfactory basis.

"(8) A representative of the schools should be selected to co-operate with the supervisors and teachers and the museum in selecting the loan material. He should also be charged with the responsibility of assembling, caring for, and circulating from a distributory centre all the material supplied by the museums.

"(9) Circulating material should not be considered as an adequate substitute for occasional visits to the central museums. Pupils should visit museums to receive instruction in subjects to be illustrated by materials which cannot be in circulation, and to become acquainted with the great educational institutions other than their schools.

"(10) Wherever public museums are not established steps should be taken to open school museums or children's museums."

## ST. LOUIS MUSEUM.

Dr. Lowe reports thus anent the "remarkable educational museum" in St. Louis, maintained by the Board of Education of that city for the use of all its schools:

"The collections which formed its nucleus were begged by Dr. Rathmann, Assistant Superintendent of Schools, from exhibitors at the St. Louis World's Fair of 1904, when the exhibits were being disbanded. He had organised a large series of visits of school children to the World's Fair, especially to the Education Section, of which he was in charge, and he realised what a powerful impression the inspection and handling of actual objects made upon the young visitors. Hence he determined to form a museum of wide scope, the objects of which should be all available for circulation and use in the schools. Housed in a remodelled school building, the museum now comprises collections of Natural History material, economic products, ethnological specimens, artistic prints, photographs, lantern slides, cinema films, gramophone records, etc., all prepared for circulation among the schools of St.

## THE ALEXANDER COLLECTION

Louis. The collections also circulate to the teachers' training schools and colleges in the area, so that the teachers may, as part of their training, acquire a knowledge of the museum's resources and gain experience in using the material for class lessons. The museum is under the care of Dr. Rathmann and Miss Meissner. The museum was unable to satisfy the demands, but it delivered a total of 61,984 collections, aggregating 571,141 objects. Seventeen people are employed in the service of the museum, and the material is circulated by motor vans."

### SIR EDWIN RAY LANKESTER.

In 1929 Sir Edwin Ray Lankester, "one of the most learned of modern men and Director of the Natural History Department of the British Museum," died at Chelsea. "His father possessed a profound knowledge of Natural history, and it was he who moulded his son's tastes. Sir Edwin was a strong advocate of the teaching of physics, chemistry, geology, and zoology in schools and colleges. He declared that the making of dead languages the chief form of education was a mistake. He was the Bohemian of the scientific world, without even a pinch of dry-as-dust pedantry, and held the opinion that with the aid of science the larger proportion of mankind ought to attain a century in age," said the *Scotsman*.

### GARDEN AND FIELD WORK.

Emerson said: "I hear with joy whatever is beginning to be said of the dignity and necessity of labour to every citizen. There is virtue yet in the hoe and spade, for learned as well as unlearned hands." There is a great waste of youthful energy which might be put to profitable use in garden and field culture, especially in the warm growing period of the year, fit, develop body, and store energy for cold, dreary, wintry days. Let all "hitch the waggon to a star," said Emerson; be natural, and follow Nature in all her ways. Knowing what was done long ago by boys and girls in garden and field labour, and how beneficial bodily, mentally, and morally, I reckon their labour might aid materially to pay for their education and nutrition, and make them capable for home or colonial labour by hand or head as occasion called. Let head and hand go "hand in hand" educationally. Yes, "summer in the field and winter in the study" be, as of yore, the rule. Students used to work manually during the summer six months. The St. Andrews students had a holiday called "Meal Monday" to enable them to go home for the supply of oatmeal, which was their staple food in bygone days. Of course, they claimed the holidays, though I dare say nobody in my time would likely require to avail himself of the privilege—foreign foods becoming more in use. Farm servants, too, once lived mainly on oatmeal and milk, supped three times a day as "brose," and they were brawny, brainy, and the backbone of the country. How they could wield the hoe, spade and scythe, before the introduction of foreign foods and labour-saving machinery! I know from personal experience. They were welcomed in every British colony. There was no "ca' canny" then, as a rule, but an independent spirit, strong personality, individuality—sturdy oaks, with great staying power in peace or in war, as all the world knows.

### DUNS' SCHOOL GARDEN.

In 1930 a conference on rural science in schools was held at Duns, and members visited Duns school garden, "a model of its kind." The work done and methods employed were fully explained by Mr. D. Thomson, headmaster of the school, my colleague and like-minded companion in Girvan High School thirty-eight years

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ago. "Experimental plots constitute a special feature, small areas being occupied by crops grown under varying conditions as to manuring, time of planting," etc. It was arranged that lectures should be given by the College of Agriculture staff on agriculture, horticulture, and poultry keeping; in addition, there was to be ample practical work, and Mr. Thomson assisted when necessary and supervised the operations that had to be carried out in the intervals between the weekly lessons. The scheme was most admirably carried out. After showing how the work brought into play mensuration, geometry, composition, drawing, woodwork, chemistry, and botany, Mr. Menzies, in his second report, said: "This is surely sound education as well as good husbandry; instruction cannot but be more effective for the stimulus given by the consciousness of immediate utility. The instruction is thoroughly scientific in spirit. The pupils acquire permanent habits of attention and intelligent observation, which should be of the greatest service to them in the future. And the whole thing is conceived and carried on in a resourceful, economical way. Up to the present, and leaving out of account the college lectures, the enterprise has been entirely self-supporting. A large number of necessary articles have been made within the school, and the sale of produce has served to do the rest and leave a balance in hand."

### VILLAGE COLLEGE.

On 30th October 1930 the Prince of Wales opened the first Village College at Sawston, near Cambridge. The village centre is the first of a group of eleven colleges which are to be built throughout Cambridgeshire. The object of the scheme is to provide that type of education specially suitable for children living in an agricultural county. They will be taught to cultivate the land, there being three and a half acres adjoining the college. The building has cost £16,000. There was a gift of £5500 from the Carnegie Trustees, and £1200, together with the site, was given by Mr. and Mrs. Spicer. The Spelman Fund of New York has offered a grant of £45,000, which is to be used towards the cost of the remaining colleges throughout the county.

The Earl of Elgin spoke at the ceremony for the Carnegie United Kingdom Trust. Andrew Carnegie, he said, was a son of the people, born in a Scottish village. He left his money as a benefaction to those he termed the toiling masses, and the instructions he gave to his Trustees were that they were always to be on the lookout for pioneers, and they were to bear in mind the needs of the toiling masses. These words were necessarily associated in their minds with large centres of population, but his colleagues and himself felt that it was not only in large centres they found the toiling masses, and they tried to appreciate that one of the largest industries was found in small villages, in isolated cottages, and in shepherds' cottages solitary upon the hillside. It did not take them long to make up their minds that the village college was an experiment in which they could place their trust, and make contribution.

### SCHOOLS AND FARMING (New Zealand).

On 13th November 1930 my former pupil, brother-in-law, and brother of the Professor of Animal Husbandry, Canada, John Brown, B.Sc.(Glasgow), N.D.A., Chief Instructor in Agriculture, Canterbury Educational Board, New Zealand, published an article anent in *The Press*, N.Z., in which these statements occur:

"The idea that the school should be something more than an educational organism, that it should relate itself to the whole life and welfare of the people, and be the main fountain from which ideals of service flow, is slowly gaining ground."

## THE ALEXANDER COLLECTION

Education is not merely a matter of acquiring the facts, ideas, and ideals which make up our lives—quite essential to the end, and therefore fully warranting the importance attached to them in our school curriculum—but not the end in themselves.

"The aim of education, broadly stated, is to teach how to live, and to prepare for life work. It has taken us long, and many do not yet realise that the objects, activities, interests, and phenomena of the child's environment should constitute the means of education. When these are agricultural, as they are in most of our schools, then agriculture is, or should be, the predominating influence and the outlook in our schools. That is the argument for an agricultural bias in our schools. It should be noted, however, that the aim is not to be confused with the training for the occupation of farming.

"The reasons for the introduction of agriculture into the schools, either as a subject or as a motif in the curriculum generally, have been well expressed by Davenport, and are worth repeating:

"(1) To cultivate an interest in, and instil a love and respect for, land and the occupation of agriculture.

"(2) To create a regard for industry in general, and an appreciation of the material side of the affairs of a highly civilised people.

"(3) To cultivate the active and creative instincts, as distinct from the reflective and receptive that are otherwise almost exclusively exercised in schools.

"(4) To give practice in failure and success, thus putting to the test, early in life, the ability to do a definite thing.

"(5) To train the child in ways and methods of acquiring information for himself, and incidentally to acquaint him with the manner in which information is originally acquired and the world's stock of knowledge is accumulated.

"(6) To connect the school with real life, and make the value and need of schooling the more apparent.

"(7) As an avenue of communication between the pupil and the teacher, it being a field in which the pupil will likely have a larger bulk of information than the teacher, but which the training of the teacher can help to more exact knowledge.

"These are the aims underlying the school work in agriculture in Canterbury, and in pursuit of them our teachers here and there are becoming every year bolder. Here, for example, are some of the interests which served as occasions for agriculture class excursions last year: visits to freezing works, woollen mills, nurseries, orchards, and stud farms, seeing the head-harvester at work, seeing ensilage stacked, studies of lucerne growing in the field, participating in the Agricultural Department's field days, visiting the winter show. For the little ones, nature rambles are almost weekly events with up-to-date teachers.

"Observation studies in the school garden, combined with practice in the fundamental operations of gardening, and first steps in the science of common life and agriculture by laboratory methods, are regularly taken in all schools, and although the time is limited to one hour per week, the work is co-ordinated as far as possible with the other school work. Further, they evoke the greatest interest in the pupils, and provide a real educational stimulus; even if comprehension may not be complete.

"The writer would like finally to reaffirm, out of a long experience in the teaching and practice of agriculture under many varied conditions, his conviction that the hope of an agricultural education worth the name rests with the district high schools throughout the country."

## EDUCATION GRANTS TO MUSEUMS

On 7th March 1931 the *Scotsman* states:

"Following upon the recommendations given to the Trustees (Carnegie Trust) by Sir Henry Miers in his review of the public museums of the country, it was possible to say that an advance had been made towards the formation of a definite line of policy. As a preliminary, £7000 had been set aside, and grants limited to a maximum of £250 had been offered to a limited number of public museums in towns with populations of 10,000 to 70,000 inhabitants." Thus coming events cast their shadows before, and soon a great change will pass over our educational system for the benefit of the whole community. So what Emerson called the cock-crowing stage of education and civilisation is at last passing, and a glorious day dawning and gladdening all earth inhabitants.

### REFERENCES.

The Director of Education for West Lothian writes: "I return with thanks your manuscript on Natural Education based on the principles of the Alexander Collection. This I have read through with much interest and profit. I should like if such a collection were available for the pupils of this or any other town of the county."

"Memo. from Professor Sir J. Arthur Thomson, 13th January 1932"—about a month before his death, on 12th February:

ST. MARY'S LODGE,  
SIMPSFIELD, SURREY.

Pray accept my heartiest thanks for your very interesting and moving reminiscence. It stirs pleasant memories of meeting you in Ayr.

Allow me to express my sincere compliments and kindest regards.

## BURROUGHS' LETTER

This letter from John Burroughs, well-known naturalist of Washington, U.S.A., was a reply to one from me, expressing thanks and appreciation of his writings on Natural History, and also in support of the cause of the Allies in the Great War:

EXPERIMENT, GA.,  
22nd February 1915.

A. S. ALEXANDER, Esq.,  
AYR, SCOTLAND.

DEAR SIR,

I have received yours of the 1st inst. A letter from Scotland is always a great boon, and one from Burns's country, where I spent many happy days, is doubly so. Thank you for all your hearty words of appreciation. The cause of the Allies weighs upon my heart night and day. I hope I shall see your lovely country again, but I am getting to be a pretty old man, though still well and active. Let me congratulate you on your nature studies and the beautiful country in which you pursue them. With all good wishes,

I am,

Very sincerely yours,

JOHN BURROUGHS.

## B.—CATALOGUE OF COLLECTION

Call to Belleisle—Aim—Explanatory Note—A. Geological—B. Botanical—C. Zoological—D. Archæological—E. Geographical—F. Historical.

CALL TO BELLEISLE, Ayr.

“Under the greenwood tree (G. Arden)  
Who loves to lie with me (Blearee)  
And turn his merry note  
Unto the sweet bird's throat (Ornithology)  
Come hither, come hither, come hither.  
And these our lives exempt  
From public haunt (Golf Course),  
Find tongues in trees (Botany),  
Books in the running brooks (Burns),  
Sermons in stones (Geology),  
And good in everything—  
'Honest men and bonnie lasses' (Zoology).”

## AIM.

My main aim in making, naming, cataloguing so was *educational*—not mere passing evanescent *show*; so that, by regular personal application, all true lovers of Scotland may know the land well, and render more dear the blessing of being born and bred amid its beauties.

## EXPLANATORY NOTE.

The collection is placed (1926–1933) in 8 Rooms (R.), Cases (C.), Tables (T.), Walls (W.), Drawers (D.), numbered from left to right; specimens affixed to tables and walls run in rows and usually in order of relationship, lower to higher type. Contractions used are R., C., T., W., D., and a figure indicates the number. Thus R. 3, C. 2 means the objects are in Room 3 and Case 2. Specimens are classed in six groups—A., B., C., D., E., F. as above.

## A.—GEOLOGICAL.

(a) Mounts and Maps Geological:—24 (cardboard) mounts (m.) pictorial, Astronomical, and Geological, showing development, from a nebular condition, of the Solar System in general and of earth in particular to its present condition with stratified fossiliferous rocks (R. 6, C. 1 and C. 5 (out), W. 3). A map of the

Geological Structure of the world. Geological Survey Map of Ayrshire (scale 1 in. to mile). Palæontological (fossil) Map of British Isles, showing rock formations in colours, localities for fossils, figures of fossils and their names (R. 6, W. 3).

Four charts pictorial of Prehistoric Life—Palæozoic (old-life), Mesozoic (mid-life), Cainozoic (recent-life), quaternary (fourth or present) ages. These show sea, land, flora, and fauna existing during the periods (R. 6, W. 3). A Geological Map of Oil Shalefield of Lothians and Coalfield of Linlithgowshire, etc. (R. 6, C. 4, D. 1). A Geological Map of Ayrshire (small scale—R. 2, W. 4).

(b) 70 specimens, mostly *water-worn igneous* rocks from Ayrshire shore, varnished and wired on wood, arranged from acid (high % Si O<sub>2</sub>) Granites to basic (high % Mg O, Fe O). Serpentine of Lendalfoot, Girvan.

200 specimens of *igneous* rocks, free and unvarnished, mainly from Scotland, arranged also from acid to basic (R. 6, C. 7).

(c) 127 specimens of *Metamorphic* (after-form, altered from original) rocks that form most of the rugged ancient scenic region from Outer Hebrides to the great fault or break from Stonehaven to Rotheray. These are also arranged from acid *gneisses* of Hebrides and N.W. Scotland to *quartzites* (altered sands), shining *schists* (much altered muds or other), *marbles* (altered lime), and *slates* (little altered mud) that form rough but beautiful lands of deer forests and lovely lakes of Perthshire with “silver strands” (R. 6, C. 6 and 11). 37 specimens of *Gabbro* and *Diallage* from Lendal Bay, Girvan (R. 6, C. 4).

(d) 173 specimens of *Serpentine*, polished or varnished, mainly from Lendalfoot, Girvan. These are lavas altered by hydration and of Arenig Age, about the oldest rocks in Ayrshire, probably more than 400 million years old—since liquid—and when no flowering plant, no animal higher organised than shell-fish or Mollusc existed, so far as known (R. 6, C. 2, 4, 5).

(e) 387 specimens of *Agate*, polished or varnished, mainly from the Heads of Ayr and shore of Ayr, and from Lunan Bay, south of Montrose. These were formed in steam cavities of the consolidated lava, erupted near Dunure and near Montrose, when the Sidlaws, Ochils, Cheviots, Pentlands, Heads of Ayr rocks were forming, during the Old Red Sandstone (of Scotland) or Devonian (of England) (R. 6, C. 2, 3, 4, 5). 66 microscopic slides of *Agates* from the Heads of Ayr and shore to Ayr (R. 6, C. 11).

(f) 440 specimens of *Minerals*, British and Foreign, including ores of gold, silver, copper, lead—mainly from Leadhills and Wanlockhead—iron, zinc, with associated calcite, pyrite, dolomite, barytes, and so on (R. 6, C. 11 and 5; R. 7, C. 2).

288 specimens of *Minerals* from Russell, 48 Essex Street, London:—Anthracite, actinolite, albite, Amazon Stone, analcime, Anglesite, antimonite, apatite, asbestos, atacamite, argentite (silver ore), azurite; bitumen, boracite, barytes, beryl, Brewsterite, bismuth; calcite, calamine, cancrinite, catlinite, cerite, cerussite, chabasite, chalcopyrite, chalybeate, chlorite, chromite, chrysoberyl, chrysocolla, cinnabar, citrine, corundum, copper (native), cobalt, copper-nickel, cuprite, coccolite, cassiterite (tin ore), cryolite, cymatolite, carnelian (white, red); datolite, diallage, dolomite; elaterite, enstatite, erubescite, eucolite, euxenite (of 5 rare elements—cerium, niobium, titanium, yttrium, uranium); franklinite; galena (lead ore), garnets, graphite, gypsum, gold (native), göthite; heulandite, hexagonite, hematite (iron ore), hornblende; idocrase, ilmenite; jade, jet; kainite, kaolin, kerargyrite, kyanite; labradorite, lapis lazuli, lepidolite, leucite, limonite (iron ore), lironite, lithomarge; magnesite, magnetite, manganese, marcasite, mesotype, microcline, mimetisite, mispickel, molybdenite, morvenite; natrolite; obsidian, oligoclase, olivenite; pectolite, picrolite, pilolite, pisolitic iron, pitchstone, prehnite, protovermiculite, psilomelane, pyrolusite, pyromorphite, pyroxene; quartz; realgar, redruthite, rhodenite,

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rosaline, rutile; sahlite, sanadine, serpentine, silver (native), scapolite, scorodite, sheelite, specular iron, sphene, spodumene, stilbite, sulphur; talc, thulite, Thomsonite-tincal, topaz, tourmaline, tremolite, turquoise; vivianite; wavellite, Websterite; zinc-blende (R. 7, C. 2).

1 mount of *gem* or *precious stones* in natural colours, very realistic in good light, with: (1) Diamond; (2) Diamond (crystal); (3) White opal; (4) Ruby (crystal); (5) Ruby; (6) Yellow Sapphire (Oriental topaz); (7) Sapphire; (8) Emerald; (9) Moonstone; (10) Topaz; (11) Emerald (crystal in matrix); (12) Cat's Eye; (13) Tourmaline; (14) Fire Opal; (15) Turquoise; (16) Black Opal; (17) Peridot; (18) Alexandrite; (19) Balas Ruby; (20) Aquamarine; (21) Amethyst (R. 2, W. 2).

56 *chips* of rocks from famous localities around the Mediterranean: (1) King's palace near Lisbon; (2) Algeciras; (3) Algiers; (4) Ajaccio; (5) Carthage; (6) Naples; (7) Baiae (near Naples); (8) Cettinge; (9) Olympia; (10) Old Corinth; (11) Acropolis (Athens); (12) Mars Hill (Athens); (13) Parthenon (Athens); (14) Salonica; (15) Constantinople; (16) Troy (Asia Minor); (17) Nazareth; (18) Bethany; (19) Tiberias; (20) Dead Sea; (21) Pyramid of Gizeh; (22) Pharaoh's Tomb (R. 6, C. 11).

(g) Fully 1000 specimens of *sedimentary* rocks, mainly *with fossils*, arranged in order of time from Pre-Cambrian Torridonian Sandstone of Skye and N.W. Highlands to the present or quaternary age. Ayrshire rocks and fossils are well represented. Oldest specimens are placed lowest and read from left to right—upwards, in order of recurrence in the strata as a rule (R. 6, C. 7, 1—order of time).

Also R. 8, C. 1, 2, 3, 4—*special collections*: Dobb's Linn *Graptolites* (Silurian); Auld Brig o' Ayr fossil *ferns* and reeds; spores, cones, ferns, *woods* (fossils) (Carboniferous); petrified *polished* woods from Arizona, U.S.A. (Tertiary), with photo of forest and explanatory extract from the American mineralogist's work (Dana); *corals* (fossil) from Girvan (Silurian), Devonshire (Devonian), Muirkirk and Dunbar (Carboniferous); *crinoids* from Muirkirk and other localities; *Worm burrows* in quartzite (altered sand) from Sutherland (Cambrian, reckoned by the late J. G. Goodchild, President of G.S.E. and Curator of the Geological Department of Royal Museum, Edinburgh, to be at least 700 million years old); worm *burrows* and tracks from Girvan (Silurian); worm *tracks* and *rain-pit* impressions from Carrick Hill, Ayr, and Heads of Ayr (Old Red Sandstone); worm burrows and tracks from Hailes quarry, Edinburgh, and other localities (Carboniferous).

*Trilobites* (fossils) from Girvan (Silurian) and Dalry (Carboniferous); *Shrimps* (fossils) from Gullane (Carboniferous); and remarkable stones crowded with *orthids*, etc., shells from Mulloch or Kirk Hill, Girvan (Silurian); *fish* (fossil) remains from Muirkirk (Seggholm) (Silurian)—earliest vertebral forms; fish remains from Orkney and Caithness (Old Red Sandstone), and from Burdiehouse, Edinburgh (Carboniferous); *reptile* (fossil) remains from Westbury, England (Trias); *ammonites* (fossil), polished and unpolished, and other molluscs (Lias, Oolite, Cretaceous); *Molar* (portion, fossil) of Mammoth, said to have been found in Ayrshire (R. 8, C. 1, 2, 3, 4).

(h) 96 Geological microscopic *slides*, mainly of *igneous* rocks, such as the De'il's Dyke, including those in Ayrshire but excluding slides of agates already given (R. 6, C. 11).

(i) Miscellaneous *geological matter*: 4 mounts—The *Nebula* in Orion; a giant spiral nebula, March 1923; a solar *cyclone* (R. 2, W. 3); Vesuvius in *eruption* (R. 2, W. 2).

Report by Dr. Anderson and Dr. Flett on the volcanic eruption in the West Indies.

Letter from J. McNeilly, Esq.—pupil, High School, Girvan—Grenada, anent this eruption (R. 6, C. 4, D. 3).

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NOTE.—Details will be found on labels and, in special cases, in my work, *Tramps Across Watersheds*, with pages of reference specified on tables.

### B.—BOTANICAL.

There were 1060 cardboard mounts of preserved plants and pictorial:

(a) 153 m. (mounts), *Seaweeds* (Algæ) from Ayrshire, between mouths of Ayr and Doon; British; and only a few foreign (R. 7, C. 1, W. 1, 2, 3, 4). Two bottles of *Sargassum vulgare* (seaweed), Atlantic (R. 2, C. 4).

(b) 10 m. *Lichens* from Ayrshire (R. 7, W. 3).

(c) 73 m. *Mosses* from Ayrshire and Lake District of England (R. 7, W. 2, 1, 4 (note order), also R. 8, C. 1, R. 4, W. 4).

(d) 107 m. *Ferns*, British and Foreign (R. 2, W. 1, 2, 3, 4; R. 3, W. 4; R. 7, W. 4, 3, 2 (note order), R. 8, W. 4).

(e) 4 m. *Horse-tails* (R. 7, W. 2).

(f) 2 m. *Selaginellas* (R. 7, W. 2).

(g) 1 m. *Clubmoss* (R. 7, W. 2).

(h) 35 m. *British Grasses* (R. 7, W. 2, 1, 4; R. 8, W. 4).

(i) 25 m. *British Sedges* (R. 7, W. 4; R. 8, W. 4).

(j) 530 m. *British Flowering* mainly from Ayrshire (R. 7, W. 3, 2, 1; 4, 3, 2, 1 (note order) (circle); R. 8 (W. 1, 2, 3, 4), 4 (four circles); R. 6, W. 1, 3; R. 4, W. 1, 2, 3).

(k) 91 m. *pictorial plants*, including British, German, Swiss, Alpine in natural colours and showing habitats (in part); and in German translated into English, English popular names, and Latin. These were originally used in Agricultural College, Glasgow (R. 8, W. 1, 2, 3, 4 (lowest row all round)).

3 m. with 74 common *Garden Flowers* (cultivated) in natural colours (R. 2, W. 4).

(l) 13 m. *Christmas twigs*, showing condition of buds of bushes and trees on Christmas Day, 1906, from Ayr (8 Wattfield Road, garden) by Longhill Avenue, Burns's Monument, and Auld and New Brigs o' Doon, Burns's Cottage, Rozelle Wood, to Ayr (R. 7, T. 2, below).

(m) 22 m. *Sections of Woods* used in carpentry, cut to show transverse, longitudinal, and "figure" appearances (R. 7, T. 1, below). Also specimens of bog oak from Ballantrae; oak from Spanish Armada ship sunk near Tobermory; oak from ceiling of Cassillis Castle of 13th century; oak from Mint House of Stirling; oak from foundation of pier of "Auld Brig o' Ayr"; oak from the oakbeams of the Old Stockwell-gait Bridge, Glasgow, erected by Bishop Rae in A.D. 1345 and demolished to make way for Victoria Bridge founded in A.D. 1851 (R. 7, T. 1, 2).

(n) 4 m. *Seeds* in 78 tubules affixed thereon. These seeds were used for study in Agricultural College, Glasgow; and are in general use in agriculture, horticulture, arboriculture (R. 8, C. 1).

(o) *Foreign fruits* mainly, and plant *products*, including *Kauri* pine wood with resin from New Zealand; seeds of Chile pine; cone of *cedar*, cones of fir; bit of stem of "Trysting Tree" of Robert Burns and Highland Mary; *sugar cane* from Grenada, West Indies; coco-nut, *cocoa* pod and beans; peach fruit; maize; cotton pods (bursting) showing "raw" *cotton* from America and Egypt; cotton grass from Scotland; nutmegs, walnuts, Brazil nuts; seeds of indigo, tamarind, castor-oil plant, Job's tears; *tea* leaves and fruit; *coffee* bean; *tobacco* leaves; Nigeria raw *rubber* (quarter of a "biscuit" brought by a "boy" to his manual instructor who forwarded it to me)—the liquid rubber had fallen in drops on the leafy mould below; Uganda bark cloth, given me by an Ayr Academy pupil who fell doing duty in the Great War; Manitoba birch bark with poem in ink thereon, from Ayr Grammar School pupil

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—for many stones, bones, barks, or other enshrine memorials of dear departed earnest lovers of nature, from Scotland in general and Ayrshire in particular. Hence the collection is acquired by Ayr. Acorns from Smyrna for extraction of *tannin* for tanning leather; and various other plant products (R. 8, C. 1).

(p) 112 Botanical microscopic *slides*, used by students of Glasgow and Edinburgh, and in Ayr Academy Continuation Botany class by me in teaching microscopic botany (R. 8, C. 2).

(q) Miscellaneous *Botanical Matter*:

5 m. "Sun-kissed" *fruit* at foot of "snow-topped" mountain, California; Tapper of trees in fastnesses of a Para *rubber* forest; Harvesting *coffee*; Japanese *ricefields*; Pickers at work in a *tea* plantation (R. 6, C. 1).

3 m. Types of *insectivorous* plants.

A highly evolved *orchid*, *Odontoglossum crispum*; Composition of certain common *foods* (R. 2, W. 2).

1 m. Microscopic flint shell of *diatom*, *Arachnoidiscus*, Ehrenbergi.

### C.—ZOOLOGICAL.

(a) Maps Zoological:

Pen and ink *Zoological Map* of the world drawn by a pupil of Dollar Academy in 1860, showing fully 100 animals in small scale, in their habitats in sea and on land (R. 6, W. 3).

*Zoological Historical* map of the world with a series of pictures of famous discoverers—Columbus, Cabot, Marco Polo, Drake, Raleigh, Cook, Lander, Franklin, Livingstone, Stanley, Peary, Amundsen, Shackleton. It also shows the routes of these explorers, and the animals in their habitats (R. 6, W. 4).

(b) 1280 mounts of *Zoological pictures*, in two series; the first of photos, the second of pictures drawn to show external characters and internal structures accurately. The two series are complementary, and both are highly informative. These circle all W., T.—in all but R. 1.

880 m. *First Series*, photographic:

6 m. Foraminifera (forams), Infusoria, Sponges.

7 m. Corals, Jelly-fish, and others.

11 m. Sea-urchins, Star-fish, and others (R. 2, W. 1).

41 m. Insects: Butterflies, Moths, Beetles, Bees, etc. (R. 3, W. 1, 4).

8 m. Crabs, Lobsters, Tortoises, and others (R. 2, W. 1, 2, 3).

19 m. Molluscs (shell-fish) (R. 2, W. 2, 3).

49 m. Fishes (R. 2, W. 3, 4).

33 m. Reptiles (R. 2, W. 3, 4).

444 m. Birds, British and Foreign (R. 2, W. 4; R. 4, W. 1, 2, 3, 4, C. 10, below).

8 m. Marsupials—Kangaroos, Opossums, etc.

2 m. Flying Squirrels.

13 m. Gophers, Cavies, Rabbits, Beavers, Ant-eaters, Sloths, Chameleons.

11 m. Narwhals, Manatees, Dolphins, Porpoises, Sea-lions, Walruses, Seals, Whales.

15 m. Wolves, Civets, Mongooses, Polecats, Pine-Martens, Gluttons, Foxes, Dogs (R. 2, C. 2, below).

45 m. Badgers, Racoons, Genets, Bears, Cats, Tigers, Lions, Leopards, Jaguars, Moles, Porcupines, Hedgehogs, Bats (R. 6, C. 11, below).

40 m. Pigs, Horses, Giraffes, Hippopotami, Rhinoceroses, Elephants, Oxen (R. 6, C. 11; R. 8, C. 1, below).

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36 m. Sheep, Llamas, Camels, Deer (R. 8, C. 2, below).

46 m. Galagos, Lemurs, Monkeys (R. 8, C. 2; R. 8, C. 3, 4, below).

33 m. Man (R. 8, C. 4, below).

13 m. Various animals (R. 3, W. 2, 3).

440 m. *Second Series*. These are uniform in size, 9 in. by 11 in., and arranged, so far as convenient, from lower to higher type, and cover the same field of animal life as the first series, but with additional illustration of anatomical structure and physiological function.

46 m. Insects (R. 3, C. 1, 2, below; R. 5, T. 1, below).

58 m. Molluscs (R. 5, T. 1, 2, below).

20 m. Fishes (R. 4, C. 10, below).

32 m. Reptiles (R. 4, C. 10; R. 6, C. 11, below).

112 m. Birds (several specimens on each m.) (R. 6, C. 11, below; R. 7, C. 1, 2, below; R. 8, C. 1, 2, 3, below).

2 m. Polecats to Weasels.

4 m. Whales to Dugongs.

3 m. Hedgehogs to Shrews.

2 m. Bats.

3 m. Seals to Walruses (R. 8, C. 3, below).

5 m. Skunks to Civets.

13 m. Hyænas to Bears (R. 8, C. 4, below).

5 m. Ant-eaters to Sloths (R. 8, C. 4, below).

48 m. Oxen to Elephants (R. 2, W. 1, 2; R. 2, C. 2, below).

13 m. Hares to Mice (R. 2, W. 2, 3).

34 m. Lemurs, Monkeys, and others (R. 2, W. 3, C. 4, below).

NOTE.—The starting-point in the "Zoological tree" is in R. 2, W. 1, and the top or final is in R. 8, C. 4, below, with pictures of Huxley and other high types of man, *Homo sapiens*.

(c) 158 m. Miscellaneous *Zoological pictures*.

2 m. (glass) with 31 specimens of *Moths*, British, in natural colours and with popular names (R. 3, W. 1).

1 m. with 121 specimens of *Butterflies* and *Moths*, in natural colours, with popular names, and Latin (R. 3, W. 4).

3 m. (glass) with 100 specimens of *Molluscs* (shells), British and Foreign, in natural colours and popular names (R. 3, W. 3).

1 m. with 41 specimens of *Sea-Water Fish*, in natural colours, with popular and Latin names, and average weight of each at maturity in lbs.

3 m. with 74 specimens of *Fish* with tackle and bait, in natural colours, and popular names (R. 1, passages; R. 3, W. 2, 3).

2 m. with 39 specimens of *British Birds* with habitats, in natural colours, and popular names (R. 2, W. 4).

1 m. with 91 specimens of *British Eggs*, in natural colours, and popular and Latin names.

11 m. with 144 specimens of *British eggs*, in natural colours, and popular names (R. 4, W. 2).

*Zoological Specimens*:

(d) 7 Recent Sponges, from Grenada, West Indies (R. 2, C. 4).

(e) 60 Recent White and 12 Red Coral (R. 2, C. 1).

(f) 1400 Insects—Butterflies, Beetles, Bees, Wasps, Locusts, and others from Britain, Brazil, California, Columbia, Guiana, East Africa, South Africa, Nigeria, India, Japan, and Peru (R. 3, C. 1, 2).

(g) 40 m. with fully 1000 British *shells* (R. 3, W. 1); 20 m. with fully 500 Foreign *shells* (R. 2, W. 1); 1000 Foreign shells (R. 2, C. 2).

- (h) 13 *Fishes*, preserved (R. 1, C. (wall); R. 2, C. 4).  
 (i) 25 *Reptiles*, preserved (R. 1, C. (wall); R. 2, C. 4; R. 6, C. 4). 1 Cobra being killed by Mongoose; 1 Edible Frog, W. Indies.  
 (j) 72 *Nests*, British (R. 4, C. 8); 8 Nests, Foreign (R. 4, C. 7).  
 (k) 1100 *Eggs*, British (R. 4, C. 10); 51 Eggs, Foreign, mainly from Transvaal, Egypt, Australia; 2 Eggs, fossil, from Isle of Losbos, off Peruvian coast, and found in guano; 3 Eggs of Crocodile from Zambesi, Africa; 1 Egg of Snake from Illinois, U.S.A. (R. 4, C. 9).

(l) 429 *Birds*, British; 397 Birds, Foreign (R. 4, R. 5, R. 6).

All British species of hawks, including 4 Golden Eagles, 5 Peregrine falcons, also Owls, Crows, Game-Birds, Goosanders, Cuckoos, Corncrakes, Bittern, Ailsa Craig Birds, with fine photos of Ailsa Craig with its bird life by the late Charles Kirk, Artist-Taxidermist, Glasgow; Red-throated, Black-throated, and Northern Divers, Buzzard, etc. The foreign collection includes many rare and lovely well-mounted specimens, including Bird of Paradise, New Guinea; Lyre-bird, Australia; Impeyan and Tragopan Pheasants, Himalaya; Gold Pheasant, China; Bateleur Eagle, Africa; Gyrfalcon or Arctic Hawk, from Arctic by Dundee Whalers; Albatrosses, from the Antarctic; Ivory Gulls, with Arctic scene painted and mounted by Charles Kirk; Humming-birds from South America; Trogons, Toucans, Pompadours from Guiana; Tanagers, Jacamars, Grosbeaks, Woodpeckers, Blue-creepers, Cockatoos, Parrots, Parakeets, Shrikes, Manakins, Waxwings, Weavers, Honey-eaters, Jungle Fowl (ancestor of domestic fowl), Kiwi from New Zealand; Canaries, and crosses with Linnet, Bullfinch, Goldfinch, Ibis, Squacco Herons from Nile; Penguin from Antarctic.

(m) 1 albino Mole, 1 Barbary Squirrel; 2 British Squirrels, 5 Ermines or Stoats (R. 4, C. 6); 2 Bills of adjutant birds of India; Bones of *Moa* Ostrich from New Zealand (extinct) (R. 4, C. 9); 1 British Fox, with 2 rabbits (R. 6, C. 8); 1 Polecat, with fish (R. 6, C. 9); 1 Arctic Fox (R. 6, C. 10); 1 Hippopotamus' skin (in part) (R. 6, W. 3); 1 Hippopotamus' skull (R. 6, W. 2); 2 Elk or Moose horns (R. 6, W. 2); 2 Elk's feet; 4 Roe-deer's feet (R. 6, C. 3); 1 Rhinoceros' skull (R. 6, C. 4); 6 Monkeys' skulls (R. 6, C. 6); 1 skull, with horns of Buffalo from India (R. 6, W. 2); 1 skull, with horns of Springbuck Antelope (R. 6, C. 3); 1 skull, with horns of Hartebeest Antelope (R. 6, W. 2); 1 Alligator; 1 pair horns of Bush Buck Antelope (R. 6, C. 4); 1 pair horns of Kob or Cob Antelope (R. 6, W. 2); 1 skin of Roe-deer; 1 head of Bear; 1 head of Wart-hog from Abyssinia; 1 head of 4-horned Iceland Sheep; 1 head of black-faced Highland Ram; 1 head of Big-horn Sheep from Rocky Mountains, Canada; 2 pairs of horns of Red Deer; 1 pair of horns of Ox (R. 1); 2 skulls and portions of skulls and teeth of Tigers; 1 skull of Lion; 1 skull and claws of Bear; 1 tooth of Leopard; 9 teeth of Hippopotamus; 1 canine tooth of Wild Boar; 1 canine tooth of Babirusa (pig); 2 horns of Rhinoceros; 1 portion of Molar tooth of Elephant; 1 pair of horns of Roe-deer; 1 pair of jaws of Capybara of Brazil (R. 1, C. in W.); 1 pair horns of Ibex Goat from Swiss Alps; 1 pair horns of Wapiti Deer of Canada; 1 head of Imperial Red Deer of Britain; 1 pair horns of Common Hartebeest, Gemsbok, Koodoo Antelopes of Africa; 1 head of Reindeer; 1 pair horns of Reindeer (young); 1 head of Elk or Moose (young) from Canada; 1 head of Fallow Deer from Barbary and English Parks; 1 head of Roe-deer from Scotland; 1 head of Paseng Goat from Persia; 1 head of Common Goat from Britain; 1 head of Koodoo or Kudu Antelope, 1 head of Waterbuck Antelope, 1 head of Sable Antelope, 1 head of Ariel Gazelle Antelope, 1 head of Reed-buck Antelope from Africa; 1 pair of horns of Red Deer from Britain (R. 1, landing and passages).

(n) 53 Physiological microscope slides, used in teaching microscopic Physiology in Girvan; 71 Pathological slides, used in studying microscopic Pathology (R. 8, C. 4).

(o) Miscellaneous *Zoological Matter*:

6 m. pictorial: Insect Life. The web of a spider; a glimpse of a variety of life; the evolution of domestic pigeons; a deep-sea scene; luminous deep-sea animals from mid-Atlantic; a prawn, *Acanthephyra*; a cuttle-fish, *Thanmatolampas*; a fish, *Gonostoma* (R. 2, W. 2).

6 m. Cross-section of spine of Sea-urchin magnified, *Cidaris metularia*; dwellers in the solitudes of the Continent; feathered travellers arriving in Britain for the winter; ages of various animals; how nature gets over difficulties (R. 2, W. 3).

2 m. A small boa-constrictor seizing and devouring a rat; chameleon shooting out its tongue to capture a fly (R. 2, W. 3).

1 m. coral islands. The greatest builders in the world. By Professor Sir J. Arthur Thomson, M.A., LL.D. (R. 2, C. 1, out).

7 m. Wonder Journey of the Birds—an illustration showing various methods of Flying and Swooping; how the Albatross "Taxies" to get a start; an article on the Albatross; protection, coloration or camouflage; beaks of birds; seasonal changes (R. 4, C. 4, out).

1 m. Preparing the Eggs of Silkworms for Hatching (R. 6, C. 1).

1 m. Drama of Evolution, by Professor Sir J. Arthur Thomson, M.A., LL.D. (R. 6, C. 4, D. 3).

2 m. Antarctic animals in the Scottish Zoological Park, by Dr. William S. Bruce; the Golden Eagle, a study in early June 1927, by Seton Gordon (R. 6, C. 4, D. 1).

D.—ARCHÆOLOGICAL.

(a) 118 m. of *Pictures* in catalogue of National Antiquarian Museum, Edinburgh (R. 2, W. 1, 2, 3, 4; R. 3, W. 3, 4).

(b) *Ayr Trench Finds*.—Glaciated stones, bullions, fossil ferns and reeds, from boulder clay bed about 20 ft. below Ayr, and exposed in trenches in sewerage operations during 1900–4 (R. 6, C. 3). Oyster, cyprine, cockle, mussel, and other shells in Old Sea Beach (25 ft.) bed, lying over the clay in the same trenches. Driftwood, hazel-nuts, leaves, and other plant debris in a bed exposed in King's Street and North Harbour Street, overlying the shell-bed. Mediæval pottery ware, and poor-fired unglazed grey clay jar with thumb impression—delivered as treasure-trove to the above Museum, Edinburgh. Horns, or portions of Red Deer, Long-fronted Ox, Bos longifrons, Common Goat. Bones of Horse, Ox; and Human Vertebrae and portion of skull from trench near Fort Castle. A clay-pipe head of James VI and I's period (R. 6, C. 3). Ring penny and twopenny pieces, dated 1797, with George III's head thereon (R. 2, C. 3).

(c) *Dunure Finds*.—Bones and shells from "kitchen-midden" bed, outcropping in the sea-cliff below the castle (R. 6, C. 3).

(d) *Crossraguel Abbey (Chapel) Finds*.—Mediæval pottery, human bones, quartz pebbles as used in burials (R. 6, C. 3).

(e) *Craigdow and Mulloch Hill, Girvan, Finds*.—Perforated sandstone ring, an inch or so in diameter; bone, mediæval pottery, and other white-clay objects (R. 6, C. 3).

(f) *Dumbuck Crannog Finds*.—Bones of Red Deer, Ox, Pig; calcined shells; bit cut off gunwale of oak canoe, 37 ft. by 4 ft., dug out of solid oak; portion of piles, showing marks of chipping; cannon coal, rounded and probably polished (R. 6, C. 4).

(g) *Dunragit, Wigtownshire, Finds*.—Pieces of cinerary urn, calcined human bones, flint chips, arrow-heads, blue beads, bits of iron (R. 6, C. 4).

(h) *Birrens Roman Camp Finds*.—Charred wheat, yellow pottery, black and grey pottery, iron steeple from the "Court" well and much corroded (R. 6, C. 4).

(i) *Grenada, West Indies, Carib objects*.—Carib stone axes, arrow-heads, idols, and other articles (R. 6, C. 4).

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(j) *Somaliland Prehistoric* stone axes (R. 6, C. 5).

(k) 524 *Coins, Tokens, and Commemorative metal pieces, and paper money*—French, German, Greek, and Turkish of the Great War period. Number of each indicated and arranged in order of time in the case: British 106, Canadian 29, U.S.A. 29, Brazil 4, Argentine 2, Uruguay 2, Peru 3, Scandinavian 6, Danish 9, Holland or Netherlands 6, Belgian 29, French 73, German 30—some of base metal during occupation of Belgium—Portuguese 13, Spanish 17, Sardinian 2, Sicilian 2, Swiss 4, Italian 20, Austrian 1—dated 1760, large and with lovely lettering—Hungarian 13, Bavarian 3, Greek 4, Rumanian 2, Turkish 1, Egyptian 9, St. Helena 1, Nigerian 2, South African 1, South African Republic 3, all silver—1s., 2s., 2s. 6d. or so in value, 1896, with Kruger's head—Persian 4, Indian 13—oldest 1792, with figure of elephant—Ceylon 1, Burmese 2, Siamese 1, Hong Kong 1, Sumatra 1, Japanese 3, Chinese 8, Australian 6, defaced 26, Paper money—French 6, German 4, Turkish 1, Greek 1 (R. 2, C. 3).

(l) *Various Archaeological articles*.—Iron cannon ball, about 3 inches in diameter, probably fired by the Spanish Armada ship sunk near Tobermory, Mull. It was dug out of a garden there. Two small iron balls from the Crimea. Portion of the *Vindictive*, the ship sunk in Ostend Harbour during the Great War. German *coffee bottle*, found full of hot coffee by a New Zealand soldier at Messines Ridge shortly after the explosion of the 12 miles mine thereunder; Japanese *razor*; *Cup* of bog oak; *Chips* from the Great Wall of China, and photo of the Wall taken by a lady missionary (R. 6, C. 4). 16 *Chinese weapons*, ensheathed and ornamented with ivory and other decorative material, being various forms of daggers and swords (R. 1, passage).

(m) *Miscellaneous Archaeological matter*.—Picture Dictionary of the Great Roman World: Acropolis in the days of Pericles; Call to Worship of the New Moon; sights of 1900 years in the Astounding Land of Provence; the tower Julius Cæsar built in France; Arena of Arles, with 7 miles of stone seats to seat 23,000 people (R. 6, C. 1). Pictures and diagrams of Dumbuck Crannog, Dumbarton; a letter from discoverer Donnelly (R. 6, C. 4, 5). New Light on Prehistoric Man, by Professor James Geikie (R. 6, C. 4, D. 3). Excavations of the Roman Station in Annandale, by Dr. Christison, Mr. Barbour, Dr. Macdonald, and Dr. Anderson (R. 6, C. 4, D. 3). *Scotsman* articles on Caribs; Excavations on Deeside; Ancient encampments at Stewarton and Stevenston, by Joseph Downes, Irvine; Standing Stones in Argyllshire, by Dr. Christison (R. 6, C. 4, D. 2). Antiquarian Discovery in Dumbartonshire, by W. Donnelly, B.A.A.; Bible, dated 1734; Booklet, *The Whole Duty of Man*, 1741; Anonymous Booklet of poems, Girvan, 1854 (R. 6, C. 4, D. 1). Copy of letter by Mary Queen of Scots on morning of execution (R. 6, C. 3, D. 2). *Wellington's Waterloo Despatch* in *Times* newspaper, 22nd June 1815 (R. 6, C. 3, D. 1). Political Cartoons of Gladstone—Salisbury period (R. 6, C. 3, D. 3).

## E.—GEOGRAPHICAL.

(a) Maps: Large Orographical Map of Clyde basin, showing heights brown, depths blue, lowlands green (R. 6, W. 1). Map of Transport and Communication for Southern Scotland (R. 6, W. 3); Small map of same for Ayrshire (R. 2, W. 4). Bird's-Eye Map of British Front in France, in four sections, each 4 ft. by 2 ft. (R. 6).

Small maps of various countries placed with pictures of the countries.

(b) 423 m. pictorial of these countries: 2 m. Abyssinia (R. 4, W. 2); 3 m. Afghanistan (R. 6, W. 1); 13 m. Africa (south) (R. 4, W. 1, 4); 4 m. Albania (R. 6, W. 4); 11 m. Algeria (R. 4, W. 2); 5 m. Andorra (R. 6, W. 4); 15 m. Annam (R. 4, W. 3; R. 6, C. 7); 6 m. Antarctic (R. 6, C. 7); 2 m. Arabia (R. 6, W. 1); 24 m. Arctic (R. 6, C. 7); 7 m. Argentine (R. 4, W. 2); 4 m. Armenia (R. 6, W. 1); 9 m. Austria (R. 6, W. 4); 4 m. Bolivia (R. 4, W. 2); 9 m. Brazil (R. 4, W. 2); 13 m. Canada

## CATALOGUE OF COLLECTION

(R. 6, C. 7; R. 6, W. 4); 42 m. England (R. 4, W. 1; R. 6, C. 7); 9 m. France (R. 4, W. 1; R. 6, W. 1; R. 6, C. 7); 21 m. Germany (R. 6, C. 1; R. 6, W. 3); 3 m. Isle of Man (R. 4, W. 1); 1 m. Japan (R. 6, C. 7); 9 m. Nigeria (R. 4, W. 3); 5 m. Palestine (R. 6, C. 6, out); 163 m. Scotland (R. 3, W. 2, 3, 4; R. 4, C. 8, in and out; R. 4, C. 1, out; R. 6, C. 7, in and out); 16 m. Switzerland (R. 6, C. 7, R. 6, W. 3); 13 m. U.S.A. (R. 4, W. 1; R. 6, W. 3; R. 6, C. 7).

(c) 60 m. pictorial of Places associated with Robert Burns, and up to 1840 by Hill: Ayr from Brown Hill, Carrick; Ayr "Twa Brigs"; Burns's Cottage (outside); Burns's Cottage (inside); Auld Alloway Kirk; Auld Brig o' Doon; New Brig o' Doon; Banks o' Doon; Cassillis Castle and Downans; Ness Glen; Kirkoswald and Tam o' Shanter Grave; Dunure Castle; Colzean (or Culzean) and Fairy Caves; Shanter Farm and Bay; Turnberry Castle; Scene on the Girvan, near Blairquhan; Mossiel; Mauchline; Braes o' Ballochmyle, Tarbolton; Glen Afton; On the Lugar, Auchinleck; Irvine; Kilmarnock; Kilmarnock Market Cross; On the Nith; Ellisland; Sanquhar; Drumlanrig; Lincluden; Dumfries; Dumfries Market Cross; Mausoleum, Culloden Moor; Foyers Falls; Gordon Castle; Bruar Water; Birks o' Aberfeldy; Loch Turrit; Kenmore and Taymouth, Stirling; Bannockburn; Edinburgh Castle; Loch Lomond; Auchtertyre; Scene on the Devon at Rumbling Bridge; Barskimming on the Ayr; Mill Monach at the Coil; Coilsfield, Jedburgh; Craigieburn Wood; Moffatdale; Friars' Carse; Lochmaben; Kenmure Castle and Loch Dee; Kirkcudbright; Brow on the Solway; Gatehouse (R. 6, C. 3, 4).

## F.—HISTORICAL.

(a) 52 m. pictorial of *Rulers, British and Foreign*: Statue of Alfred the Great, Queen Elizabeth, Georges II, III, IV, William IV, Victoria from youth till Jubilee, Statue of Edward VII, Emperor William II, Czar Nicholas II, Lincoln, Washington, Garibaldi, Monroe, McKinley, Palmerston, Russell, Derby, Peel, Melbourne, Aberdeen, Gladstone, Beaconsfield, Salisbury, Rosebery, Redmond, Balfour, Harcourt, Chamberlain, Milner, Rhodes, Kruger, Jameson, Laurier, Colonial Premiers in First Imperial Conference, Dufferin, Pope, Asquith, Law, Lloyd George, Clynes (R. 6, W. 1, 3).

(b) 12 m. coloured, of *Illustrious Persons* and Places of the Victorian period: Queen Victoria enthroned in 1837; and her chief ministers of State, scientists, authors, parliament, and other matters (R. 6, W. 1).

(c) 23 m. pictorial of *Warriors*: Alexander of Macedon, Roman soldiers, Agincourt, Joan of Arc's statue at Paris, Nelson on board ship, Roberts, Moltke, Kitchener on his mother's knee to leaving Parliament for the last time, Haig (R. 6, W. 1, 3).

(d) 105 m. of *Great War*, 1914–18. Each m. is 2½ by 1½ ft., size of *Scotsman*, of drawing paper strengthened with cardboard and wired at top for suspension. On these m. are seccotined, in order of time from 4th August 1914 to 1919, the *cuttings*, from *Scotsman* or other reliable sources, giving important *Declarations, Speeches, Battles, Despatches, Maps* of all parts, and most *Memorable Events* on land, sea, and air in all parts of the world.

(e) 13 m. pictorial of *Peacemakers*, and making Versailles Treaty of Peace; and places associated therewith. "Big Four": Wilson, Lloyd George, Clemenceau, Orlando (R. 6, W. 3).

(f) 23 m. pictorial of *Scientists*: Einstein, Lankester, Lodge, Thomson (R. 2, W. 2); Faraday (R. 6, C. 3, out); Linnæus, Kelvin, Lesseps, Pasteur, Owen, Darwin (Francis), Huxley, Lubbock, Lister, Spenser, Curie (Madame), Nansen, Selous (R. 3, W. 1); Agassiz, Geikie (Sir A.), Whitaker, Burroughs, Ford (R. 6, C. 5); Berry (Girvan) (R. 6, C. 2).

## THE ALEXANDER COLLECTION

(g) 10 m. pictorial of *Poets and Literary Persons*: Tennyson, Whitman, Brownings, Stevenson, MacLaren, Tulloch, Blackie, Masson, Cain (R. 3, W. 1).

(h) 62 m. pictorial of *Artists and Works of Art*: Leighton, Millais, Reid, Verestchagin (Russian) (R. 3, W. 2, 3, 4; R. 4, W. 4; R. 6, C. 6, out).

(i) 19 m. pictorial of *Preachers, Nurses and Places* associated therewith: Christ, Chrysostom, Knox, Cromwell, Bunyan, Spurgeon, Irving, Dante, Pope, Moffat, and others (R. 3, W. 1, 2, 3, 4).

(j) 25 m. pictorial of British *Cathedrals*: Bath, Chester, Chichester, Durham, Elgin, Ely, Exeter, Gloucester, Lincoln, Newcastle, Norwich, Peterborough, Ripon, Salisbury, Truro, Winchester, York (R. 6, W. 1, 3).

(k) 20 m. pictorial of *Robert Burns and Persons* associated therewith: Ainslie, Blacklock, Glencairn, Grose, Moore, Lawrie, Skinner, Smellie, Syme, Thomson (R. 6, C. 3); Burns's Statue by Flaxman, Mrs. Burns and a grandchild, Mrs. Bruce Burnet, Mrs. Dunlop, Mrs. Hay (Margaret Chalmers), Johnston (Mrs. Oswald, Auchencruive), Murray ("The Flower of Strathmore"), Mrs. Thomson (Jessie Lewars) (R. 6, C. 4). It was of Jessie Lewars Burns wrote:

"Oh wert thou in the cauld blast,  
On yonder lea, on yonder lea."

and, within a month of death, presented her with a copy of the early volumes of Johnson's *Musical Museum*, and on a blank leaf of it wrote:

"Thine be the volumes, Jessie fair,  
And with them take the poet's prayer."

"All blameless joys on earth we find,  
And all the treasures of the mind—  
These be thy guardian and reward;  
So prays the faithful friend, the Bard."

She was attentive and helpful to him in his last illness, and to his widow, and treasured the *Musical Museum and Poems* till her death.

## C.—GREAT WAR SUMMARY

NOTE.—Dates (d.) are usually one day later than the events, the sheets (s.), each 1 ft. 6 in. by 1 ft. 10 in. of drawing paper with cuttings seccotined thereon. There are 105 sheets, and four large maps of British Front in France, published by *Daily Mail*.

1914.

- 1 (s.) 4.8 (d.)—German *Ultimatum* to Belgium.
- 2 (s.) 4.8 (d.)—Scrap of paper; Sir Edward Grey's Statement.
- 3 (s.) 4.8 (d.)—Neutrality of Luxemburg; Bank Holiday in London; Fleet Mobilisation Proclamation; Reserves leave Edinburgh.
- 4 (s.) 5.8 (d.)—*Scotsman* Article on War and London Correspondence.
- 5 (s.) 5.8 (d.)—Britain's *Declaration of War* (on 4.8 d.); King's Message to Fleet and Czar.
- 6 (s.) 21.8 (d.)—Vote of 100 millions; German Chancellor on the War; *Kitchener* in France; *Kaiser* divests British titles.
- 7 (s.) 31.6 (d.)—National Relief Fund nearly 2 millions; *Louvain*; British troops in 4 days' battle; Churchill says: "At grips with Prussian Militarism."
- 8 (s.) 5.9 (d.)—Appeal to nation; Great Meeting in London by Asquith, Law, and Balfour.
- 8 (s.) 10.9 (d.)—Victory of *Marne*; Indian troops: 700 Rulers of India offer support.
- 9 (s.) 18.11 (d.)—Lord Roberts' funeral and tributes; French Yellow Book.
- 10 (s.) 30.11 (d.)—Dispatch from Sir John French, "A Month of Battle"; *Kaiser* promotes Hindenburg; German prisoners at Warsaw; Russian advance on Cracow; Russian victory on *Bukowina*; Siege of *Przemysl*.
- 10 (s.) 5.12 (d.)—What life in the trenches means; French official review of the situation.
- 11 (s.) 5.12 (d.)—Maps illustrating the campaign in Poland and Galicia; Map showing Line of Battle on 1.12 d. on the Western Front.

1915.

- 1 (s.) 27.1 (d.)—The *Naval Victory*; *Kaiser's* manifesto (15.7 d.).
- 2 (s.) 27.2 (d.)—Map of Eastern Battle front; Map of Carpathian Passes; Map of Attack on wedge of St. Mihiel; Complete diary of the War to end of April (*The Times*).
- 3 (s.) 1.4 (d.)—Map illustrating British victories in Flanders; *Neuve Chapelle* and St. Eloi; complete diary of War of Naval and Military operations to the end of January.

# THE ALEXANDER COLLECTION

- 4 (s.) 15.4 (d.)—*Zeppelin Raid* on North England; Kitchener appeal to workmen; asphyxiating gases; *Defence of Ypres*; reply to German "Blockade"; fighting in Mesopotamia.
- 5 (s.) 1.5 (d.)—Map of the critical Battlefields of Flanders.
- 6 (s.) 1.6 (d.)—Map of the Battlefields of French Artois.
- 7 (s.) 7.7 (d.)—*Dardanelles* landing described by Sir Ian Hamilton.
- 8 (s.) 12.7 (d.)—General French's Despatch on defence of Ypres.
- 8 (s.) 16.9 (d.)—Kitchener on the War; munitions output; cost of War.
- 8 (s.) 30.6 (d.)—Greece's rupture with Central Powers; Food Control; Premier's speech in Glasgow on Allies' War Aims.
- 9 (s.) 5.7 (d.)—Last Lap; a hero's last letter; "*Hing in*" poem.
- 9 (s.) 21.9 (d.)—Despatch on operations at Dardanelles from Sir I. Hamilton; Map: "At the gates of Constantinople."
- 10 (s.) 1.8 (d.)—*Great Battle of Flanders, Ypres* British Offensive; Advance in Flanders, with Maps; The Struggle at *Lens*; German *New System* of defence.
- 10 (s.) 1.10 (d.)—Diary of War to September; Map: "Scene of British Victory."
- 11 (s.) 1.8 (d.)—Germany's reply to Pope's Note on Peace; Kaiser's Proclamation to Army and Navy.
- 11 (s.) 1.10 (d.)—Map: "German advance into West Russia" (*The Times*).
- 12 (s.) 1.8 (d.)—Two days and nights steady *rainfall*.
- 12 (s.) 15.8 (d.)—French bulletin on Progress in Belgium.
- 12 (s.) 1.9 (d.)—*Italian* progress in Monte San Gabrielle; Advance near *Gaza*, Palestine; Successes in S. Africa; Facsimile of Kaiser's Letter.
- 12 (s.) 5.12 (d.)—Execution of Nurse *Cavell*; Miss Cavell's Last Hours; Message of King to "My People"; a list of gallant deeds; The Victoria Cross.
- 13 (s.) 23.9 (d.)—Map of British Offensive in Flanders (near Ypres); Battle of the *Marshes*.
- 13 (s.) 14.10 (d.)—Map of *Passchendaele Ridge* (north of Ypres).
- 13 (s.) 29.10 (d.)—Map of Italian Situation.
- 14 (s.) 30.10 (d.)—Central Powers reply to Pope's Note; *Italian Retreat*; Map of Campaign against Italy; *Passchendaele* stormed by Canadians; Map of gain in Flanders.
- 15 (s.) 2.11 (d.)—Naval Statement; toll of *U Boats*.
- 16 (s.) 22.11 (d.)—Map of advance on *Cambrai*; an historic day; how the *Tanks* smashed "*Hindenburg Line*."
- 16 (s.) 2.12 (d.)—*Cambrai Battle*, a great German effort.
- 16 (s.) 5.12 (d.)—America's War Aims; Map: "The Western Front"; Map: "On Road to Bagdad."
- 1916.
- 1 (s.) 7.1 (d.)—Suvla Bay Despatch by Sir Ian Hamilton.
- 2 (s.) 21.1 (d.)—*Evacuation* of Gallipoli; Rosebery on Trade Prospects; President Wilson's Dollar Policy.
- 3 (s.) 11.4 (d.)—The Blockade; Evacuation Report by Sir C. C. Munro.
- 4 (s.) 14.6 (d.)—*General Compulsion*; Kitchener's memorial service.
- 5 (s.) 3.7 (d.)—*Somme Offensive* begun on 1.7 d.; Gordons storm Mametz; Maps of the Somme.
- 6 (s.) 7.7 (d.)—Despatch on *Jutland* Battie by Sir John Jellicoe; Balfour's Survey of Naval Situation; Kaiser's flamboyant Address.
- 7 (s.) 28.7 (d.)—Capture of *Poizieres* and *Delville Wood* by South Africans.
- 7 (s.) 15.8 (d.)—Advance towards *Bapaume*.

# GREAT WAR SUMMARY

- 7 (s.) 12.9 (d.)—Capture of *Givenchy*.
- 8 (s.) 18.9 (d.)—Russian blows in Galicia; Somme successes, and Italian and Serb gains; Map of Allies' advance on Somme.
- 9 (s.) 30.12 (d.)—Despatch on Battle of Somme, by *General Haig*.
- 10 (s.) 30.12 (d.)—Allies' Reply to German Peace Proposals; Map of Rumanian Theatre of War; *Lloyd George* on German Peace Proposals.
- 1917.
- 1 (s.) 12.1 (d.)—New War Loan: Great Meeting at Guild Hall; Allies' reply to President Wilson; German Note to Neutrals.
- 2 (s.) 4.2 (d.)—America severs diplomatic relations with Germany; Edison's opinion of the British Navy, America, and France; Lloyd George's clarion call: "The Submarine Goth"; "A General"—the Crown Prince's Promotion; Map: "From Somme to Sea."
- 3 (s.) 15.2 (d.)—The War Loan: "*Victory War Loan*," clock advertisement.
- 4 (s.) 24.2 (d.)—Lloyd George's warning to the nation; prohibited imports and restriction; imports and *U Boat* peril; control of Liquor Traffic; *Tigris* operations.
- 5 (s.) 4.4 (d.)—*War between Germany and U.S.A.*; President Wilson's address to Congress, and reply to the Pope; "The Choice," poem by Rudyard Kipling.
- 6 (s.) 7.4 (d.)—Round the *Verdun Forts*.
- 6 (s.) 11.4 (d.)—*Vimy Ridge*; the advance on *Lens*; destroying Collieries.
- 7 (s.) 23.4 (d.)—Roosevelt's clarion call.
- 7 (s.) 28.4 (d.)—Battle of *Gaza*, Palestine.
- 7 (s.) 5.5 (d.)—Balfour's speech to U.S. Congress.
- 7 (s.) 6.6 (d.)—Tartan Princes—Scots from Overseas; "The War in the Mountains" (Alps), by Rudyard Kipling.
- 8 (s.) 8.6 (d.)—*Messines Ridge* explosion and attack.
- 8 (s.) 15.6 (d.)—President Wilson's warning.
- 8 (s.) 16.6 (d.)—*Submarine menace*.
- 17 (s.) 14.12 (d.)—Brenta, Piave Italian battles.
- 17 (s.) 15.12 (d.)—Naval allied council; "No Half-Way House" speech by Lloyd George.
- 17 (s.) 25.12 (d.)—Kaiser's praise for troops; Christmas in trenches.
- 17 (s.) 29.12 (d.)—France and War Aims.
- 1918.
- 1 (s.) 1.1 (d.)—King's New Year Message to President Wilson; Premier's New Year Message to Nation, India, Allied Powers; "Sursum corda" (lift hearts); "Coming Clash," by Churchill.
- 1 (s.) 9.1 (d.)—Navy in Arctic; Wilson's War Aims; 14 terms of peace.
- 1 (s.) 23.2 (d.)—Germany's Peace Terms to Russia accepted by Soviets; Austria's readiness to conclude peace; Map of Russia's W. Frontier.
- 2 (s.) 5.3 (d.)—Life in Ruhleben (9.1 d.); despatches on British campaigns from Arras to Flanders, and battle of Cambrai, by *Sir Douglas Haig*; Map of Cambrai.
- 3 (s.) 19.3 (d.)—Kaiser's message to Chancellor (11.2 d.) on peace, and "Heaven must aid us"; hospital ship, *Rewa*, torpedoed in Bristol Channel (4.1 d.); Entente and German Pledges; shepherding Food Ships; Count Hertling on Russian Peace Treaty.

# THE ALEXANDER COLLECTION

- 3 (s.) 23.3 (d.)—*German Cambrai Offensive* (begun 21.3 d.).
- 4 (s.) 26.3 (d.)—*Second Battle of Somme*; Messages by King, Premier, Derby; and President Wilson's congratulations on the "splendid steadfastness and valour"; bombardment of Paris; British east of Jordan.
- 5 (s.) 27.3 (d.)—Germans capture Roye.
- 5 (s.) 28.3 (d.)—Maps of scene of fighting; Haig's Message to Premier, Wilson, Canada.
- 6 (s.) 29.3 (d.)—Germans thrust towards Arras; Maps of battle front.
- 7 (s.) 2.4 (d.)—British shatter attacks at Arras and Vimy Ridge; German concentration in Albert region.
- 7 (s.) 8.4 (d.)—President Wilson's speech: "*Force to the Uttermost*"; and Message to King George.
- 8 (s.) 12.4 (d.)—Battle of Armentières; Map of Southern Flanders.
- 8 (s.) 13.4 (d.)—Haig's impressive order: "*Our backs to the wall. Every position must be held to the last man—No retirement.*" Map of the Battle of Armentières.
- 9 (s.) 15.4 (d.)—Battles at *Neuve Eglise, Lys, Bailleul*; Map of N.-E. France.
- 10 (s.) 17.4 (d.)—Germans capture Bailleul, Wytshaete, Messines Ridge.
- 10 (s.) 18.4 (d.)—French co-operating, Weteren, Wytshaete (in part) won and lost; Maps of Southern Flanders.
- 11 (s.) 19.4 (d.)—Fighting from *Givenchy to Lys*; Naval attack on Ostend and Zeebrugge; Map of Battle of Flanders; Map of Belgian coast.
- 12 (s.) 27.4 (d.)—Fight for *Kemmel Hill*.
- 12 (s.) 1.5 (d.)—German Aisne offensive; Map of Aisne.
- 13 (s.) 25.5 (d.)—Lloyd George's speech in Edinburgh: "*The Submarine Defeated.*"
- 13 (s.) 1.6 (d.)—Germans reach the Marne.
- 13 (s.) 3.6 (d.)—Map of *Great Battles between Oise and Marne*.
- 14 (s.) 18.6 (d.)—Italians fighting on Piave.
- 14 (s.) 25.6 (d.)—Rout of Austrians on Piave; Germans hope for offers from Entente.
- 15 (s.) 5.7 (d.)—*Great Battle on Marne* (18.6 d.); President Wilson declares "*There must be no compromise.*"
- 15 (s.) 16.7 (d.)—Germans cross Marne; Americans hotly engaged; Maps of German Offensive on Marne.
- 16 (s.) 20.7 (d.)—*Franco-American Victory*, Crown Prince's defeat on Marne; Maps of French counter-offensive on Marne.
- 17 (s.) 4.8 (d.)—*Remembrance Day*: King's Message to his Allies; American tribute to Great Britain; transport of Americans.
- 17 (s.) 5.8 (d.)—German retirement on *Ancre and Avere*; Map of German defeat.
- 18 (s.) 9.8 (d.)—British *Amiens Offensive* (begun on 8.8 d.); Map of New Battle on Somme.
- 18 (s.) 10.8 (d.)—Rapid advance on Somme; Map of fighting in Picardy.
- 19 (s.) 10.8 (d.)—Premier's speech: "Full steam ahead. End of tunnel getting near."
- 19 (s.) 12.8 (d.)—Rapid advance near Chaulnes and Roye; Map of Battle of Amiens.
- 20 (s.) 12.8 (d.)—Map used by brother-in-law with Canadians in Amiens Offensive.
- 21 (s.) 19.8 (d.)—British attack in Flanders.
- 21 (s.) 22.8 (d.)—British attack on 10-mile front; French advance to Oise; Map of British and Franco-American Offensive.
- 22 (s.) 26.8 (d.)—British attack on *Bapaume*; Marshal Foch says: "*All goes well*"; Map of British advance; French victories (21.8 d.).

# GREAT WAR SUMMARY

- 23 (s.) 27.8 (d.)—British advance on *Scarpe*; French nearer *Roye*; Map of British Offensive.
- 24 (s.) 28.8 (d.)—Scots and Canadians across *Hindenburg Line*.
- 25 (s.) 1.9 (d.)—Mount *Kemmel* re-won; wide breach in *H. Line*.
- 25 (s.) 3.9 (d.)—Map of W. Front.
- 26 (s.) 5.9 (d.)—French cross *Vesle*; rapid advance between Jordan and sea.
- 27 (s.) 19.9 (d.)—British advance towards *St. Quentin*; Lloyd George says: "*The Worst is over.*"
- 28 (s.) 28.9 (d.)—British advance on *Cambrai*; Bulgaria asks *Armistice*; President Wilson says: "*No compromise with Germany*"; Kaiser says: "*All is at stake*"; Cabinet thanks *Allenby* for "*unrivalled feat of arms*"; Map of Franco-American advance.
- 29 (s.) 30.9 (d.)—Entente and Bulgaria; Palestine 50,000 prisoners and 325 guns; Belgian attack between *Dixmude and Ypres*; Germany's "*grave hour.*"
- 30 (s.) 2.10 (d.)—French enter *St. Quentin*; *Cambrai* in flames; Map of Balkans; Map of Belgian advance in Flanders.
- 31 (s.) 11.10 (d.)—Viscount Grey's *League of Nations*; British capture *Le Cateau*; capture of Turkish force on *Tigris*; French capture *La Fere* and *Laon*; Germany and *Armistice*; King's message to Sir D. Haig; President Wilson's reply to Germany.
- 32 (s.) 18.10 (d.)—Fall of *Lille, Douai, Ostend*; Enthusiasm in French Chamber; Maps of Allied victories on Western Front.
- 33 (s.) 19.10 (d.)—British beyond *Roubaix* and *Turcoing*; Map of Allied advances.
- 33 (s.) 22.10 (d.)—Despatch: "*The Cambrai and Lys Offensives*," by Sir D. Haig.
- 34 (s.) 23.10 (d.)—President Wilson's "*Plain Words to Germany*"; America rejects Austrian offer; *Ludendorff* resigns Generalship; Germany's reply to Wilson; *Aleppo* occupied by British.
- 35 (s.) 30.10 (d.)—Treatment of British prisoners; another Austrian appeal to America; a waste of waters; Germans flood north of *Valenciennes*; "*On the heels of the Hun*," by Sir J. E. Parrott, M.P.; Map of Battle of Flanders.
- 36 (s.) 31.10 (d.)—*Great Victory in Italy* (30.10 d.); Map of the Victory in Italy; Turkey concludes armistice with Allies; capture of Turkish force on *Tigris* (Mesopotamia).
- 37 (s.) 2.11 (d.)—Allies' Terms to Turkey; King's congratulations to General *Allenby*; Revolution in Austria-Hungary; Serbians at outer defences of *Belgrade*; Map of pressure on the West.
- 38 (s.) 4.11 (d.)—Austrian armistice signed (3.11 d.); Lloyd George says: "*Last of Germany's props has gone*"; Emperor Karl and family gone to a "*safe place.*"
- 39 (s.) 5.11 (d.)—*Great British Victory* towards *Mons*; capture 10,000 prisoners and 200 guns.
- 40 (s.) 6.11 (d.)—Terms of Austrian armistice; "*Germany must apply to Marshal Foch*"; Map of Austria's surrender; Germans retreating on 70-mile front; *influenza* epidemic; high death-rate in Scottish towns.
- 41 (s.) 7.11 (d.)—Report on *Allenby's* campaign in Palestine; German delegates to approach Marshal *Foch*; President Wilson's reply to Germany; Mutiny at *Kiel*, "*Red Flag*" hoisted.
- 42 (s.) 9.11 (d.)—Germany handed *Armistice Terms*; Kaiser refuses to abdicate, and says: "Could not hand over Germany to the Entente";

## THE ALEXANDER COLLECTION

German Chancellor, Prince Max, resigns—then to remain in office.\*

- 43 (s.) 10.11 (d.)—Germans retreating rapidly; Canadians approaching Mons; German Navy ordered out but refuse; *downfall*.
- 44 (s.) 11.11 (d.)—Abdication of Kaiser (10.11 d.); Prince Max issues decree: "*The Kaiser and King has decided to renounce the throne*"; Lord Mayor's Show: "*a brilliant military spectacle*."
- 45 (s.) 12.11 (d.)—*Peace* (11.11 d.): Terms of Armistice; World War ended at 11th hour, 11th day, 11th month, 1918.
- 46 (s.) 13.11 (d.)—National Thanksgiving; King and Queen at St. Paul's; Ex-Kaiser's flight into Holland; President Wilson's speech: "*A peace of justice*."

## D.—REMOVAL OF COLLECTION

My reply, on 24th November 1933, to *Educationist's* "facts" anent the Alexander Collection, published in the *Ayrshire Post*, was thus: "I would say that I thought I had given enough facts in my 'long letter' of 10th instant to satisfy all as to the success of the collection at Belleisle in every way." He says I have overlooked:

(1) "The collection was only to be temporarily stored at Belleisle, but not displayed." The Burgh Surveyor allotted eight rooms to me; and £100 was voted to pay for two joiners and material for "displaying" the collection. When the money was spent, I was left alone to place and "display" as I pleased. When I had the collection nearly placed and named or labelled, the Town Council discussed whether to store it, place it in refitted stables at a cost of £300, or leave it until the end of the lease. By a narrow majority it was to be left until the expiry of the lease of five years. I hoped by that time the members of the Town Council would change their opinion and let it alone.

(2) "The location in bedrooms was not just to the museum or the mansion house." Lord Glentanar's sister, the Marchioness of Douro, accompanied by her daughter, Lady Wellesley, and her son, Lord Mornington, congratulated me on the collection after inspection of the rooms. It suited the purpose well and Dean Highet thought so too. There were thirty-two walls, eleven 12-foot tables, sufficient dust-proof cases and cover-glasses. Thus every specimen was permanently placed, protected, and in scientific order, as far as possible, making it easy to catalogue and guide, keep clean, and save labour thereafter. It was purposely varied to suit all tastes, for all are different; yet all in natural order, as far as possible; easily gripped or understood, and classified, with explanatory notes in the cases, in the catalogues, and references to pages in my book, *Tramps Across Watersheds*, giving fuller information. Room No. 5—"Bird Room"—with beautiful painted ceiling, showing birds flying in the blue sky, and honeysuckle, and virginia creeper wreathing the walls, was chosen by the Burgh Surveyor as appropriate for the birds. This room was much admired by visitors. The outlook of this room on the green lawn in front was, too, much admired. In fact, birds, room, and outlook equally harmonised and charmed all whose finer feelings were not too blunt for appreciating beautiful things.

(3) "To be educationally useful, the whole collection must be centrally situated and quickly accessible to teacher and scholar."

It was educationally useful, as my "long letter" proved, and attracted all, great and small, learned and unlearned. I was often asked: "Do teachers bring their classes to Belleisle?" My answer was: "No. The scholars come themselves, but not with teachers." Our wordy education tends to kill the love of nature in youth; and so they become more and more irresponsible in age to the beauties of nature all around. Having eyes they see not, ears and hear not, the wonders by the way; and restless, hurry hither and thither in vain pursuit of happiness and with vacant minds.

(4) "From a ways-and-means reason, the collection must be linked with an in-

## THE ALEXANDER COLLECTION

stitution, as in most towns. It cannot bear the serious oncost charges of separate housing."

The collection at Belleisle occupied rooms now let for £40 I understand; and being permanently placed, largely encased, was easily dusted and kept clean. Of course, Belleisle atmosphere is very pure and clean. The oncost of this collection was trifling, a minimum for any house of eight rooms.

(5) "In my opinion the present restrained and simple method of *display* is superior to the former one and its mass of materials. Even the great museums have reserve sections in store. The Library Committee I have heard many times complimented on the effective lay-out."

In my "long letter" I stated the appreciative opinions of most competent authorities as to the "lay-out" or "display," including Sir Thomas Oliver, Dr. Dodds, Sir J. Arthur Thomson, and Dean Highet, who heartily congratulated me on the "display" and said: "The Corporation is fortunate in having you to place and arrange the collection." He was the first councillor to inspect the result and told me, when he called to get me to make a catalogue, that at first he was opposed to my collection being at Belleisle, but had changed his mind. He also expressed a wish that when the councillors visited Belleisle I should lead them hurriedly around the rooms occupied by the collection, so that they might see my work. This I did, and received some oral expressions of approval, per the clerk, the exact words I have forgotten, being so hurried and no time to explain or give information anent the collection. As I said above (see 2), the whole collection was permanently and properly placed to suit all tastes, and to provide mental matter for all, for all are different. Yes, there were some duplicates in the collection, reserved in store as in great museums. But the Alexander Collection did not profess to be a great museum, though a lady, who had recently visited the great South Kensington Museum, said she preferred the Alexander Collection, for she felt lost in the London one; and admired the lovely outlooks from the Belleisle windows. I felt the same when I first visited the Royal Museum of Edinburgh. It was bewildering. The little bedrooms in Belleisle were a godsend; and tended to restrict, "restrain," "simplify," and concentrate attention on a little at a time of the desired subject. My "lay-out" was not to please and impress the eye so much as to satisfy scientific order and intellect. Hence the final sentence of my "Catalogue and Guide" states: "My main aim in making, placing, cataloguing so was *educational*—not mere passing evanescent show, so that, by regular personal application, all true lovers of Scotland may know the land well." In fact, I meant this unique collection to be a model means for teaching purposes, not for cramming words compulsorily, but knowing personally and lovingly things, then reading willingly the wonderful stories latent therein. Yes, its "mass of material," on which Sir Thomas Oliver congratulated me, gave ample choice for every mind of every visitor. It was a great feast, open daily from dawn to dusk, free to all to enjoy, and no compulsion, only attraction, not detraction, and peace and purity without and within. Ducks should go to water, not compelled thither.

(6) "Winter and summer, wet or fair, the collection is more easily *got at*, and 95 per cent. of our visitors will see it to the 5 per cent. who find their way to Belleisle. The collection seems to have a more promising future for it in its present place."

In my "long letter" I tried to convey the remarkable attendance that went on, especially in July and August, all the year round. As the collection was open daily, and I attended every day as a rule, I feel confident in saying the percentages above should be reversed, namely, 5 per cent. for the Library and 95 per cent. for Belleisle. Moreover, the Library is not open on Sunday, Belleisle's busiest day during the tenure of the collection there; and recent attendance does not warrant the percentage assigned. The collection truly is physically "more easily got at" in the

## REMOVAL OF COLLECTION

Library, but the beauty and natural conditions are at Belleisle, which are permanent assets and not likely to be spoiled so readily as the collection by man's intervention.

As to the future, I had all faith in Belleisle—being such a unique collection on such a unique place—but little faith in the Library, partly to its unfortunate environment and partly to its partial, disorderly, unscientific "display," or "lay-out," or exhibition; and destruction of material means of display, catalogue, notes and references in aid, explanatory at Belleisle.

Yes, a great opportunity is passing to make a second Burns Cottage and Museum near Alloway, through a short-sighted policy that threatened to ruin the Auld Brig o' Doon.

## E.—LETTERS ABOUT COLLECTION

On 28th February 1934 I wrote thus: "Last Sunday, about the anniversary of the intimation of the removal of the collection, I visited Belleisle. Belleisle House seemed deserted, a derelict, whereas it used to be a beehive of humans, the bees now swarming through the flowers of conservatory gardens, and around the greatly-extended extensive aviary. Confidence was placed in the aviarist, and his critics have been confounded. I congratulate him and the Corporation on the result. Had the Corporation put equal confidence in me and spent as much in refitting the derelict vinery for the collection as in removal, the swarm would have been passing also through a complete and systematised collection, probably in charge of the practical intelligent superintendent and fine gardeners. As the collection is not open on Sundays, Wednesday afternoons, and daily after 4 p.m., the workpeople have no opportunity of visiting it. For them it is as non-existent; they are practically shut out of Belleisle House; and the plaster statue of their favourite, Burns, is smashed! The collection was meant primarily for the workpeople, who have so little opportunity of seeing and knowing such. May it be otherwise soon." This letter was published in the *Ayrshire Post*.

### "MUSEUMS."

The chairman of a Public Libraries and Museums Committee says: "I find that at present it is accepted generally that capital expenditure on the building of museums or their extension is out of the question. Neither national nor local money is available for such a purpose. And nobody complains. In fact, the museum is not a very popular institution and it can well wait for better days: such is the accepted view where men and women so much as give it a passing thought.

"Be it admitted that there are reasons for the indifference of the people. Yet why do those in charge appear to accept the view of the average man that among all our institutions the museum is the one that is the most deserving of being regarded with a sort of amused contempt?

"In Scotland and in England most fathers and mothers are really conscientious men and women. They cannot see much to interest them, but they recognise that there are some good reasons for 'having a look' at the things in the town's museum. They enter its door once with their children, and being conscientious they go through every part of it. Alas! They leave it bored stiff; they mentally vow: 'Never again.'

"We live in an age of shorter sermons, oratories, novels, histories, biographies; everything speeded up, everywhere. We live in smaller houses, and many large houses—and more of them every day—are being forsaken.

"As a rule, our museums are too large, too crowded, too tiresome altogether. In their picture galleries, people have no time to sit down and 'look long and lovingly' till they drink in the beauties of the priceless works of art that may be there, and probably are.

## LETTERS ABOUT COLLECTION

"Egomania and megalomania have their greatest stronghold, possibly, in our museums.

"What is to be done? Use one or two or three or more of the forsaken houses as branch museums in different parts of the town or city. The space vacated in the central museum can be utilised as a lecture-hall, as a reading-room, or a research room for the use of students.

"The museum might or ought to have a beehive, an aquarium, and a display of the plants or flowers of the neighbourhood, suitably labelled, and renewed constantly. Above all, cleanliness, brightness, and enthusiasm should be features in the museum that the visitor recognises the moment he enters the doorway.

"A live progressive museum draws all sorts of friends around it. The inspiration and influence of such develop week by week, and workers for its success are unwearied in their efforts to help the staff. The history and geography of the county round are more and more the study and delight of young and old. Knowledge, thought, and action are stimulated where formerly there were only evidences of sloth and stagnation. People enter the museum in an expectant mood; they come away from it with a smile.

"The museum ought to be constantly 'in the news.' Every week, during the late autumn and winter, a lecture, preferably with the use of several exhibits in the museum as illustrations, ought to be a popular feature—in fact, the most popular series the town or city can boast. And the man who talks too long need never be asked to come again.

"A museum is not worth while if it does not make a strong appeal to the children. What do they like? Coloured pictures, certainly, and what infinite variety from which choice can be made in these days! Pictures, of course, of the birds and animals that they see before them, and others that make things almost live to their young imagination.

"Are there not too many museums whose management seems to ignore the whole purpose of their existence? It is, through the eye, to extend our knowledge of progress and development, in our own and other lands, of art, science, history, and literature. There is a want of balance when a whole room is taken up by examples of weapons of war of every type and age. The cult of the beautiful rather than the ugly, of those things that built up civilisation rather than those which tended to hinder and destroy it, should be the concern of the museum.

"Above all, be it remembered that its original purpose was to serve as a home or haunt of the muses.

"Our museums can be made to play a most considerable part in the development of culture and happiness in the life of the people, but everywhere there is necessary, at all times, the preliminary duty of taking thought rather than acting blindly on outworn tradition."

The following copies of *two letters*, published in the *Ayrshire Post*, may interest:—

1st letter.

### THE ALEXANDER COLLECTION

22nd August 1934.

SIR,

A few weeks ago my wandering footsteps led me into the Carnegie Library to view the pictures on exhibition there; from there I went into the adjoining room to have a look at the Alexander Collection, as I last saw it in Belleisle House.

I got the severest shock of my life when my eyes rested on the heterogeneous collection of fossils, seaweed, etc., as it now is. There lay the work of the best years of Mr. Alexander's life just as if some ruthless hand had stirred them up with a

## THE ALEXANDER COLLECTION

porridge-stick. Specimens of one age mixed with another, and the tickets describing the various items mixed up in the general m  le so that anyone reading them would need to have great faith and also great ignorance. I picked up and examined some of the rarer specimens, and, if so inclined, could have filled my pockets with them. There was no one sufficiently alert to stop me, and no one to even blow the dust off them. Specimens of seaweed had become detached from their cards and lay about mixed with fossils, leaving a blank card hanging bare, ditto ferns, ditto specimens of shale, ditto most things. A tobacco-box lay there full of fine fossils, and the only printed matter near them was on the box itself, calling attention to the excellence of its original smoking mixture. It is just sacrilege, and I don't like to imagine what Mr. Alexander's feelings are. This was one of the most interesting collections of the kind I ever saw. It was an asset to the county of Ayr, most interesting and educative, but now it is merely misleading. Who is responsible? Is it the County Council or the Town Council? Councils are not supposed to have a soul. I am sure they have no conscience, or is it that the caretaker is overburdened with other duties? I can only offer Mr. Alexander my heartfelt sympathy in what must be to him nothing less than a calamity.

I am, etc.,

"INTERESTED."

2nd letter.

## ALEXANDER COLLECTION

8 WATTFIELD ROAD,  
AYR,

25th September 1934.

SIR,

In the annual report of the Carnegie Library it is stated that *ex-Dean MacIntyre* asked if there was any truth in the statement that the Natural History Collection was badly laid out as compared with what it was at Belleisle.

I have repeatedly and publicly explained that the above collection is only partially and not scientifically laid out as it was at Belleisle. It is now, as "Interested" pointed out, as if some ruthless hand had stirred it with a porridge-stick. I did congratulate the Librarian and staff under the abnormal conditions imposed upon them, when eleven vanloads of the collection, displayed in eight rooms of Belleisle, were hurriedly and chaotically removed and dumped down to be put in one room of the Carnegie Library. The Librarian and staff did their best, and deserve credit and congratulation under the untoward circumstances.

## AN UNPUBLISHED LETTER TO THE AYR TOWN CLERK

8 WATTFIELD ROAD,  
AYR,

22nd August 1934.

P. A. THOMSON, Esq.,  
Town Clerk,  
AYR.

SIR,

## ALEXANDER COLLECTION

Though the above date is my 74th birthday, please inform the Ayr Town Council that I hope to have the pleasure of replacing the above collection in its old home, Belleisle Mansion, and nowhere else, as the associations therewith are tender and

## LETTERS ABOUT COLLECTION

riveted in the hearts of thousands of visitors from home and abroad. To remove Burns Cottage to Main Street, Newton, would shock millions of people over all the globe. It would be tragic, and is unthinkable: so with this collection.

Yours faithfully,

A. S. ALEXANDER.

## LETTER PUBLISHED IN AYR ADVERTISER AND AYRSHIRE POST

8 WATTFIELD ROAD,  
AYR,

20th November 193

SIR,

## SIR GODFREY COLLINS ON ENVIRONMENT

Sir Godfrey Collins, Secretary of Scotland, recently emphasised the importance of good environment in connection with housing schemes, and stated that the six countries of Europe visited by Housing Commissioners of Britain seemed to have put more value thereon than we British had done.

It is admitted that all life is influenced by the nature of environment, for good or ill. Children born and bred in slum conditions are heavily handicapped in life, both physically and mentally, as compared with others in reverse conditions.

It is the environment of Carnegie Library, as compared with the environment of Belleisle Mansion, that mainly makes me mourn the calamity of the collection therein. Belleisle environment can't be put in Main Street, Newton, but the collection can be put in Belleisle environment. One can extend the Library but can't radically change its environment, offensive to every sense of the body and to every faculty of the brain.

May Belleisle be a Corstorphine, with botanic garden, museum, zoo—the delight, education, ornament of Ayrshire, and a big attraction to all, great and small, visiting the Braes of Bonnie Boon and big-hearted Burns, healthful, helpful, open daily, as day, to all.

Yours, etc.,

A. S. ALEXANDER.

F.—LETTERS ABOUT *TRAMPS ACROSS WATERSHEDS*

H.R.H. PRINCE OF WALES

ST. JAMES'S PALACE, S.W.,  
29th May 1934.

SIR,  
I am desired by the Prince of Wales to thank you for the copy of your book, *Tramps Across Watersheds*, which you were good enough to send and which His Royal Highness has been pleased to accept.

Yours faithfully,

H. KYD THOMAS,  
Asst. Private Secretary.

A. S. ALEXANDER, Esq., M.A., F.G.S.E.,  
c/o John Smith & Son Ltd.,  
Publishers,  
GLASGOW.

SIR JOHN S. FLETT, F.R.S., Director-General of the Geological Survey of  
Britain and President of the Geological Society of Edinburgh.

GEOLOGICAL SURVEY AND MUSEUM,  
JERMYN STREET,  
LONDON, S.W.1,  
17th September 1934.

DEAR MR. ALEXANDER,

I was indeed pleased to receive your book which I shall enjoy reading as the subject interests me very much. I have not been in Ayr for several years, but next time I am there I shall visit your collection at Belleisle Mansion.

We are busy here preparing a new museum for opening to the public next year, and if you come to London I should like to show it to you. We had a very successful Centenary Celebration in Edinburgh.

Yours faithfully,

JOHN S. FLETT.

SIR THOMAS H. HOLLAND, F.R.S., Hon. D.Sc., D.L., LL.D., K.C.S.I.,  
K.C.I.E., Principal and Vice-Chancellor, University of Edinburgh, and President  
of the Geological Society of London

UNIVERSITY OF EDINBURGH,  
14th September 1934.

DEAR MR. ALEXANDER,

It was very kind indeed of you to send me a copy of your *Tramps Across Watersheds*. It looks to me like a week-end treat—the notes and thoughts of a real

LETTERS ABOUT *TRAMPS ACROSS WATERSHEDS*

naturalist, a species nearly extinct, but worth revival. How one sympathises with the chemist, the mathematician, and the classical student who are doomed to blindness when out-of-doors! What dull lives they have to spend with the bliss that is possible only by ignorance of the world around.

When you are this way I hope you'll drop in to see me; the naturalist is not yet dead in Scotland, I am glad to find.

Yours sincerely,

THOMAS H. HOLLAND.

UNIVERSITY OF EDINBURGH,  
2nd October 1934.

DEAR MR. ALEXANDER,

I sincerely hope that the Ayr Town Council will realise the error that seems to have been committed in moving and so disarranging your collection. They don't understand evidently its general value as well as its local value as an inspiration to young naturalists. I hope, however, that the error will now be realised and the collection suitably restored and housed. The prophet has to exercise much patience with "his own people" when they don't know what they do.

I hope you will have something better to report soon.

Yours sincerely,

THOMAS H. HOLLAND.

SIR ROBERT S. RAIT, C.B.E., M.A., LL.D., Principal and Vice-Chancellor,  
The University, Glasgow

THE UNIVERSITY, GLASGOW,  
2nd October 1934.

DEAR MR. ALEXANDER,

I returned home yesterday and found your most kind gift in my room. In spite of the things that have to be done on arrival, I have been wise enough to yield to temptation and to read some of your delightful book. The *Scotsman* did not exaggerate in remarking that it is an excellent companion and full of knowledge, and I should like to add that the knowledge is imparted to the reader with a friendly intimacy that gives a great charm to the book.

With many thanks,

I am,

Yours very truly,

ROBERT S. RAIT.

SIR JAMES COLQUHOUN IRVINE, C.B.E., Ph.D., D.Sc., LL.D., F.R.S.,  
Principal and Vice-Chancellor, University of St. Andrews

THE UNIVERSITY,  
ST. ANDREWS,  
17th September 1934.

DEAR MR. ALEXANDER,

I found awaiting me on return from holiday the copy of *Tramps Across Watersheds*, which I owe to your kind thought. Some of your excursions are known

## THE ALEXANDER COLLECTION

to me from boyhood's days and I look forward in winter evenings to renewing my acquaintance through your pages with scenes once so familiar.

With renewed thanks and kind regards,

Yours sincerely,

J. C. IRVINE.

A. S. ALEXANDER, Esq., M.A.,  
c/o CARNEGIE PUBLIC LIBRARY,  
AYR.

SIR ANDREW R. DUNCAN (once my colleague in Ayr Academy, now Director of the Bank of England)

TRAFALGAR BUILDINGS,  
1 CHARING CROSS, S.W.1,  
2nd September 1934.

A. S. ALEXANDER, Esq.,  
8 WATTFIELD ROAD,  
AYR.

MY DEAR MR. ALEXANDER,

I am just back from holiday to-day and find your letter of 24th August awaiting me. It does indeed revive joyous memories, and I am delighted to hear from you after so many years and to learn that you are still going strong. I well remember the visit to which you refer, and, alas, also my ignorance!

I will peruse your volume with more than ordinary interest, and I hope with much profit. I have motored through all the country covered by your book many times, and it will do me good to learn how much one misses when one substitutes mechanical power for foot.

I am interested to hear of Cecil, and wish him well. I may drop in and see you one time when I am in Ayr.

With kindest regards to you and yours,

Yours sincerely,

ANDREW R. DUNCAN.

PROFESSOR FRANK D. ADAMS, D.Sc., F.R.S., Professor of Geology,  
Geological Survey

MCGILL UNIVERSITY,  
MONTREAL, CANADA,  
16th November 1934.

DEAR MR. ALEXANDER,

It is now nine weeks since I received from you the copy of your most interesting work, entitled *Tramps Across Watersheds*.

I have read it with the greatest interest, containing as it does so many charming glimpses of interesting and romantic places in Scotland which in most cases the passing visitor would never see. I should like to take tramps myself with your book in my hand to see for myself these places which you describe. I am now busy about many things at home. The winter has not come yet, and although we have no snow and the weather is still quite mild we must look before long for the wilder weather which will in all probability come before Christmas.

## LETTERS ABOUT *TRAMPS ACROSS WATERSHEDS*

We all enjoyed our visit to Edinburgh on the occasion of the Centenary Celebration of the Geological Society of Edinburgh immensely, and desire to thank you for all you did to make our stay so pleasant.

I have delayed writing this letter of thanks to you, since I could not find your address. I am now sending this letter to you by Professor Jehu, who is good enough to forward it to you. Again thanking you,

I remain,

Yours most sincerely,

FRANK D. ADAMS.

## G.—“THE SCOTTISH SCHOOL OF GEOLOGY,”

by Professor Adams

Enclosed in Professor Adams' letter of 16th November 1934 was a gift, a “Reprint of his Address, ‘The *Scottish School of Geology*,’ given at Edinburgh on the occasion of the Centenary Celebration of the Geological Society of Edinburgh, 3rd September 1934”:

“The celebration of the centenary of the Geological Society of Edinburgh must indeed be an occasion of very especial pleasure for anyone who takes an interest in the development of the science of geology. For it was in this city that what has been called the Scottish School of Geology took its rise and for a brief half-century—A.D. 1780 to A.D. 1825—made the city of Edinburgh one of the greatest centres of geological learning of the time.

“Here it was that Hutton, who may fairly be called one of the founders of modern geology (A.D. 1726–A.D. 1797) was born, lived, and wrote his epoch-making work, *The Theory of the Earth*. It was here that Sir James Hall, the ‘founder of experimental geology,’ carried out his celebrated researches, which gave such valuable support and corroboration to Hutton’s explanations of certain phenomena which he had observed in the field. And it was here that Playfair, professor of natural philosophy in the University of Edinburgh, wrote his *Illustrations of the Huttonian Theory*, a work on which he bestowed much time and labour, and which did so much to elucidate Hutton’s views and to present his theory in such a clear and attractive form that it achieved a widespread acceptance.

“These were the three great leaders of the Scottish School of Geology, but there were other men associated with them who occupied less important positions and whose work it is impossible here to make further mention. Hutton being the chief exponent of the views held by this school, his explanation of the origin and structure of the earth came to be known as the Huttonian theory.

“Another circumstance which gave an additional impetus to the study of geology in Edinburgh was that about the same time that Playfair was appointed to the chair of natural philosophy at the University of Edinburgh, Robert Jamieson received the appointment of regius professor of natural history at this same seat of learning. Jamieson had studied geology at Freiberg under Werner and, being an able and active exponent of Werner’s opinions, promulgated them in Edinburgh, and in 1808 founded the Wernerian Natural History Society, in the publications of which Werner’s views were set forth and strongly advocated.

“There thus arose an active controversy between the supporters of the Huttonian and Wernerian Schools, which led to a close study and active scrutiny of the respective tenets of the two parties, especially as applied to the elucidation of the geology of Scotland. The views of Hutton prevailed over those of Werner in the end, and Jamieson is said to have frankly admitted his conversion to the views of his opponents.

“So soon as in Europe the men who were directing their attention to the study of the origin and structure of the earth’s crust ceased merely to speculate and turned to actual observation in the field, the course which their studies took was determined very largely by the character of the rocks which were exposed to view in their respective areas. Thus the early Italian geologists, studying the late Tertiary rocks of northern Italy, which contained an abundance of well-preserved fossils very similar in character to the shells of animals living in the adjacent sea, devoted a great deal of attention to the question of the origin of these fossils, whether they were really the remains of animals which had once been alive and, if so, how it was possible that they were now found high up on the tops of the mountains.

“If they lived in southern Italy, the presence of Vesuvius and Etna forced them to consider the question of the nature and origin of volcanoes and their accompanying earthquake phenomena and the bearing of these on the question of the condition of the earth’s interior. In like manner the early geologists of France came to devote their studies largely to palæontology, while Werner in northern Germany had his attention directed chiefly to the question of the nature and succession of the stratified sedimentary deposits and the constitution of the geological column, as well as to questions of the origin and classification of the ore deposits for which Saxony and the adjacent parts of Germany were renowned and where mining had been carried on for nearly a thousand years.

“And so in Scotland, where undisturbed fossiliferous strata were seldom seen and where there were no volcanoes, the attention of the geologists of the Scottish School was devoted chiefly to the inorganic side of the science. The upheaved, broken and metamorphosed strata, consisting largely of very ancient rocks, often presenting distinct unconformities and penetrated in all directions by igneous intrusions, presented a complex whose study was beset with many difficulties, but which revealed clearly the fact that these rocks in their present form had been the result of a long succession of separate shatterings and upheavals, evidently connected in many instances with the action of deep-seated plutonic forces. Fire, or at least heat, had evidently played an important part in these successive ‘revolutions.’ At the same time the clear evidence of the continuous waste of land under the influence of the atmospheric forces, with the production of immense quantities of detritus washed down from the hillsides and eventually finding its resting-place in the sea, where it built up new stratified formations which would in their turn be upheaved to form new lands, were to Hutton and his followers a conclusive demonstration that the forces of both fire and water had acted through immense vistas of past time, their succession presenting, to use his celebrated phrase, ‘no traces of a beginning and no prospects of an end.’

“The insistence on these views, which are now so well established that they seem almost self-evident, was Hutton’s great contribution to the science of geology. They were set forth in his great work, *The Theory of the Earth*, and the demonstration of their truth was the glory of the Scottish School of Geology. Incidentally, I may be allowed to narrate a rather amusing little incident in connection with Hutton’s *Theory of the Earth*. As is well known, it first appeared in the *Transactions of the Royal Society of Edinburgh* in 1788 and then, enlarged and extended, was published in book form under the same title in 1795. This book consists of two volumes, but the work was incomplete, the treatment of the subject being cut off abruptly at the end of the second volume, the intention being evidently to complete it in a subsequent volume or volumes. This third volume, however, was never published, although there was reason to believe that the manuscript had been prepared by Hutton. This manuscript, however, could not be found.

“Upon the death of George Huntington Williams, the very brilliant young geolo-

gist, who was the first to hold the chair of geology at Johns Hopkins University in Baltimore, his widow founded and endowed a course of lectures to be delivered annually at that university in his memory. Sir Archibald Geikie was invited to give the first course of these Williams lectures, and chose as his subject 'The Founders of Geology.' These lectures were published as the second and enlarged edition of his book which bears that title.

"I went to Baltimore to hear these lectures, but did not arrive until the evening of the day on which the first one had been delivered. At a dinner-party given in honour of the lecturer on this evening, Dr. Clarke, Williams' successor in the chair of geology at Johns Hopkins University, remarked to Sir Archibald that he had been much interested in what had been said in the inaugural discourse concerning the missing part of *The Theory of the Earth*, and Sir Archibald then gave an account of the search which for years past he had made in every library in which he thought the manuscript might possibly have found a resting-place, but without being able to find any trace of it.

"Well, Sir Archibald," I said, 'I can tell you where it is.'

"Sir Archibald looked at me in blank astonishment, and said: 'Where is it?' and I replied: 'In the library of the Geological Society of London at Burlington House, standing on the shelf beside the two printed volumes of Hutton's *Theory of the Earth*, and on the fly-leaf is a statement to the effect that it was presented to the library by Leonard Horner.'

"As a matter of fact, when reading in this library a few months before the evening in question, on asking for Hutton's *Theory of the Earth* the attendant brought me the two printed volumes and with them a third rather shabby-looking volume, remarking that he had found 'this old thing' on the shelf beside the others and thought that possibly I might find something of interest in it.

"On examination it proved to be the long-sought-for manuscript, and I sent a letter to *Nature*, which appeared in the issue of 10th October 1895, announcing its discovery and making a brief reference to its contents. This had escaped Sir Archibald's notice. On his return to England, the Geological Society of London, at his suggestion, had the manuscript printed, and it appeared as Volume III of *The Theory of the Earth*. It is to be noted, however, that this did not contain all the missing portion of the work—there are some additional chapters which are still missing and will indeed be a treasure-trove if anyone can find them.

"It has been suggested that I should make some reference to the relation of British to Canadian geologists in the development of the science of geology.

"The Scottish School of Geology played an important part in the development of our science in Canada, largely through the influence of Sir William Dawson and Sir William Logan.

"Dawson was born of Scottish parents in the town of Pictou, in Nova Scotia, and received his preliminary education in the school and academy at that place. He early showed a keen interest in natural history, and in 1840 came to Edinburgh, entered the university and became a student of Jamieson's. His experiences as set forth in his brief autobiography throw an interesting light on the conditions of travel and study at that time.

"He left Halifax on a sailing-ship loaded with timber and bound for Newcastle. The ship was nearly wrecked by a series of violent storms which it encountered, and when the last of these subsided found itself off the historic island of Lindisfarne. From there it made its way to Newcastle. Dawson remained but one evening there, and that he passed at a meeting of a debating society of young men to whom he had been introduced. He took some little part in the discussion, and at the close of the debate he tells us he was congratulated on speaking English so well—a fact which

recalls to mind a recent observation by Lord Ponsonby to the effect that a Scottish accent is an enormous advantage to a speaker.

"The members of the club presumably supposed that coming from Nova Scotia his native language was Chippewa, Micmac, or some other Indian dialect.

"There were no railways at that time in northern Britain, so that next evening Dawson proceeded to Edinburgh by stage and the following morning found himself in the High Street. Jamieson, who was his principal teacher, he says, devoted a large part of his earlier lectures to physical geography and the remainder to minerals and rocks. Dawson remarks that he was surprised later on to find how little even some of the more eminent English geologists of the day seemed to know of mineralogy, and consequently how uncertain was their diagnosis in the field of rock masses.

"At the same time," he goes on to say, 'I regretted that I could not obtain any systematic instruction in palæontology, geological surveying, and in some other important subjects.' He, however, provided himself with Maclaren's excellent book on the local geology and made frequent excursions in the vicinity of the city.

"While in Edinburgh," Dawson writes, 'I received much personal kindness and useful guidance from Jamieson, Forbes, Balfour, and other leading men connected with the university. Also from Alexander Rose, an excellent mineralogist, being an authority on the minerals of Scotland and Ireland. It was through him that I was introduced to Mr. Sanderson, the lapidary, who sliced fossil wood for Witham and Nicol, from whom I learned something of the art of preparing slices of rocks and fossils for the microscope which was afterwards of great advantage to me.'

"Having completed one academic session at Edinburgh, he was obliged to return to Nova Scotia, but went back to Edinburgh and resumed his studies in 1846.

"Dawson, on his return to Nova Scotia, was appointed to a position as school inspector, which required him to pay repeated visits to every part of the province. In so doing he acquired a knowledge of the geology of the whole of what now constitutes the Atlantic Maritime Provinces of Canada, which he set forth in his great volume entitled *Acadian Geology*. During this time he met two great geologists, both of whom had a marked influence on his later career; these were Lyell and Logan. Lyell, on the occasion of his first visit to America in 1841, spent some time with him. With Dawson he visited the celebrated section through the coal measures exposed along the coast of the Bay of Fundy as well as other parts of the coast line of that province, where Lyell was especially anxious to study the action of shore ice, as he was a strong adherent of the theory that the Post-Pliocene glaciation was due to shore ice, and had not been able to get any evidence in support of this theory in his examination of the interior portion of the continent, although he had diligently sought it everywhere.

"Lyell tells us how delighted he was to find in the cliff at the foot of Cape Blomidon a great groove which had undoubtedly been made by floating ice.

"The other geologist mentioned by Dawson as having greatly influenced his career was Logan. Logan was born in Montreal and received his earlier education in that city and in the high school at Edinburgh. He then entered the University of Edinburgh, where he graduated, with distinction in Mathematics, in A.D. 1817. In A.D. 1831 he became connected with the coal-mining industry in Wales and made a geological map of the South Wales coal areas, which he presented to Sir Henry de la Beche and which was by him issued as a publication of the Geological Survey of Great Britain. Later Logan returned to Canada to undertake some geological work in the Gaspé Peninsula, and eventually became the first director of the Geological Survey of Canada, having its head in Montreal.

"By his own untiring labours, and with the assistance of his colleagues through

## THE ALEXANDER COLLECTION

a long series of years, he made a most valuable contribution to geology in his description and classification of the ancient pre-Cambrian rocks of the Canadian Shield, giving to us the Laurentian and Huronian systems, but he also founded the Geological Survey of Canada, which has been continuously at work ever since, and to which we are indebted for most of our knowledge of the geology of that greatly extended area which now constitutes the Dominion of Canada. Being, furthermore, a man of large private means in that day of small things when the Geological Survey of Canada was in its infancy, he provided from his own private purse a not inconsiderable part of the financial support required to maintain the Survey in question until the Government came to recognise the great benefit which it was rendering to the country and provided adequately for its continuance.

"In A.D. 1855 Dawson left Nova Scotia and went to Montreal to assume the position of principal and professor of geology in McGill University. He worked in close co-operation with Logan for many years, who, recognising the necessity of training up young geologists to undertake the geological mapping of the Dominion, endowed the Logan chair of geology in McGill University held by Dawson, and also made provision in other ways for the teaching of geology at this seat of learning.

"And so it came about that in the early years of the Geological Survey of Canada it was Dawson's students who carried out much of the actual work of the Survey, and Sir William Dawson's son, George Mercer Dawson, at a later date became its director and continued with great distinction the work so ably inaugurated by Sir William Logan himself. Thus the influence of the Scottish School of Geology made itself directly and widely felt across the sea.

"Sir William Dawson was an honorary fellow, and both Sir William Logan and Dr. George Mercer Dawson were foreign corresponding fellows of the Geological Society of Edinburgh.

"In conclusion, the present speaker may perhaps be allowed to say that, having received his early training in geology from Sir William Dawson, and having succeeded him in the Logan professorship of McGill University, he too is proud to feel that any small contributions which he has himself been able to make to geological knowledge have in some humble and remote way been influenced and inspired by the teaching of Jamieson and his colleagues in those far-off days when we almost say that British geology took its rise here in Edinburgh."

## H.—MORE LETTERS ABOUT *TRAMPS ACROSS WATERSHEDS*

PROFESSOR W. W. WATTS, D.Sc., Professor of Geology, University of Cambridge

DEAR MR. ALEXANDER,

Thank you very much for your kind, thoughtful gift which I found when I got back here after the Aberdeen meeting of the British Association which followed the Edinburgh Celebrations.

I am looking forward to reading it with great pleasure and reviving some old acquaintances and making new ones in the different areas described.

I enjoyed the Edinburgh Celebrations very much, and we visitors have much to thank our kind hosts for. It was nice, too, that we could take it on the way to the B.A. meeting, which was also a great success.

Yours sincerely,

W. W. WATTS.

PROFESSOR A. W. GIBB, M.A., D.Sc., Professor of Geology, University of Aberdeen

A. S. ALEXANDER, Esq.

DEAR SIR,

You will no doubt have wondered at my delay in acknowledging receipt of your *Tramps Across Watersheds*. The fact is that since the early days of the British Association meeting here I have been confined to the house and only got about again a few days ago. It was a pleasant surprise to open your parcel and find some "light science for leisure hours"—just the stuff for a convalescent. As yet I have only dipped into it, but it seems very interesting, and to me especially for its local colour and references to my old teachers and colleagues like Alleyne Nicholson and Arthur Thomson. Will you please accept now my belated but most grateful thanks for your kind gift and memento of an interesting scientific Centenary, and believe me, yours indebtedly and most sincerely,

A. W. GIBB.

PROFESSOR D'ARCY THOMSON, C.B., D.Lit., Hon. D.Sc., LL.D., F.R.S., President of the Royal Society of Edinburgh, and Professor of Natural History, University of St. Andrews

"Very many thanks for sending me your *Tramps*, which I am reading with interest and pleasure"; and forwarded a copy of his address, "Fifty Years Ago, in the Royal Society of Edinburgh," delivered on 7th May 1934, in commemoration of the 150th year of the Society, and inscribed—"A. S. Alexander, with best regards from D'Arcy W. Thomson, Sept. 1934."

## THE ALEXANDER COLLECTION

This address has references to three of my professors at St. Andrews University—Baynes, editor of the *Encyclopædia Britannica*, and professor of English Literature, Logic, and Metaphysics; Campbell, professor of Greek; Chrystal, professor of Mathematics—and the geologist, Peach, member of the Geological Survey of Scotland, and Traquair, Curator and Expert on Fossil Fish in the Royal Museum, Edinburgh, whom I knew personally.

DR. ALEX. O. CURLE, C.V.O., Society of Antiquaries of Scotland

DEAR MR. ALEXANDER,

It was very kind of you to send me a copy of your charming book as a memento of the very interesting Centenary meeting, at which I was privileged to be present. Many thanks to you.

In my peaceful home here, within the city boundary but outwith the sound of a motor horn, a strange condition to enjoy, I have been browsing on your pages and recalling half-forgotten scenes in lovely, lonely Galloway, for I too have been a tramp by Deugh and Annan Waters. Years ago I did the survey of much of Southern Scotland for the Royal Commission on Ancient Monuments, and can never forget the delight of wandering over hill and dale in quest of cairns, and camps, kirks and crosses, and many another old half-forgotten remnant of bygone ages. I like, too, your reproduction of our "mither tongue," fast dying out I fear under the influence of a *superior* education.

You do not give me your address, so I hope this grateful acknowledgment will reach you.

Yours very truly,

ALEX. O. CURLE.

DR. ROBERT CAMPBELL, M.A., D.Sc., Mineralogist and Petrologist, University of Edinburgh

DEAR MR. ALEXANDER,

Please accept my most cordial thanks for the copy of your most interesting book dealing with your tramps across Watersheds. I read your book some years ago—your Juniper Green friend had lent me her copy—but I am delighted to add the work to my own library.

May I thank you also for your good wishes to myself and to the Edinburgh Geological Society. The Centenary Celebrations created a great deal of interest, and we had a splendid turn-out of British and Foreign delegates, representing most of the important geological societies and state surveys of the world. The various functions were well attended, and the interest shown augurs well for the continued success of our society.

Trusting you will be able to enjoy many more tramps on your well-loved hills,  
I am,

Yours very sincerely,

ROBERT CAMPBELL.

J. F. N. GREEN, Esq., B.A., V.P.G.S.(London)

DEAR MR. ALEXANDER,

On my return here I found your *Tramps Across Watersheds* awaiting me. I am most grateful for this delightful gift, the value of which is multiplied by

## MORE LETTERS ABOUT *TRAMPS ACROSS WATERSHEDS*

the inscription. I have particularly enjoyed Chapters IV and IX, as they deal with places I know well.

Possibly the enclosed papers may have something in them to interest you. With kind regards,

Yours sincerely,

J. FRED. N. GREEN.

There are four booklets "with the author's compliments":

- (1) *The South-west Highland Sequence.*
- (2) *The Vulcanicity of the Lake District.*
- (3) *Geology of St. David's District.*
- (4) *The River Mole.*

DAVID CLOUSTON, Esq., M.A., B.Sc., Lecturer in Botany, The North of Scotland College of Agriculture

DEAR MR. ALEXANDER,

I have to thank you most cordially for *Tramps Across Watersheds*, a very welcome addition to a favourite section of my bookshelf. I have not had time to do more than dip into it, but my first impressions are distinctly good. It contains observations which have not been recorded elsewhere, and the style is most refreshing. At this moment I am trying to get through what has accumulated in the department during the B.A. (British Association) visit, but after that I look forward to some enjoyable hours in reading your book. Again thanking you,

Yours very truly,

D. CLOUSTON.

He forwarded "with the author's compliments" his booklet, *Plant Diseases of the Garden.*

ELIZABETH MELVILLE, KIRKCALDY NATURALISTS' SOCIETY

DEAR MR. ALEXANDER,

It is with deep appreciation and gratitude that I acknowledge receipt of the autographed and aptly inscribed copy of *Tramps Across Watersheds*, which you have so kindly sent me as a souvenir of the Celebration of the Centenary of Edinburgh Geological Society.

I think you have chosen a most beautiful and appropriate way of associating yourself with the memorable occasion, and I thank you sincerely for it.

Several years ago I had your book on loan from a friend and found it so delightful that I shall take great pleasure in reading again my own copy.

Strange to say, while at the Centenary Celebration, I recommended *Tramps Across Watersheds* to another geologist, and told him about you, its illustrious author, who, personally, a few years ago, conducted me over the geological section of your wonderful museum. I have not forgotten that honour and pleasure.

Again thanking you most cordially,

I remain,

Yours sincerely,

ELIZABETH MELVILLE.

THE ALEXANDER COLLECTION

MRS. SARAH HAIG, CHRISTCHURCH, NEW ZEALAND

DEAR MR. ALEXANDER,

Our time at Belleisle was all too short, but I hope to visit it again before I leave and have an hour or two that I may at least see part of your collection.

Your book is very delightful as well as helpful. My husband and I, also my brother (Mr. J. H. Murdoch, late Principal of Scots College, Wellington, N.Z.) and his wife have tramped New Zealand as you have done Scotland, so you will know just how interesting your book is to us.

I hope that my brother may have the pleasure of meeting you when he comes to Ayr.

I am,

Yours sincerely,

SARAH HAIG.

Edinburgh 18th January 1891

The Edinburgh Geological Society

at a Meeting held here on the 16th December 1897.

electd Alexander Sharp Alexander Esq.

a Fellow of the Society

In Testimony whereof, this Diploma is signed by

J. G. Goodchild President.

John S. Mac

Thomas Wallace

James Currie Secretary



DIPLOMA OF EDINBURGH GEOLOGICAL SOCIETY

## I.—PURCHASERS OF TRAMPS ACROSS WATERSHEDS

### PURCHASERS.

Some purchasers of *Tramps Across Watersheds* recorded by me at Belleisle in 1928-32 to indicate its wide distribution and importance of visitors there then.

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 Jas. Thom, Lorenzo Marques, Portuguese  
 East Africa.

And many more purchasers from all over Britain, of various occupations and importance, and appreciative of the Alexander Collection, Belleisle Mansion, gardens, and grounds around—centre of scenic, poetic, historic, hill, vale, ocean, Arran, sea lochs, interests and beauties in a concentrated enchanting form.

### HELPFUL BOOKS.

These books will be found full of knowledge, reliable, handy, and highly helpful to all earnest students of geography, geology, botany, and ornithology of the British Isles; and form the ABC of practical knowledge and personal observation. These should be in every home and in every educational seminary in Britain. Know the native land first—rocks, plants, birds, and geography—and make use of museums, botanic gardens and zoos, as well as out-of-doors generally.

- (1) *Touring Atlas* of the British Isles, specially prepared for cyclists, motorists,

## PURCHASERS OF TRAMPS ACROSS WATERSHEDS

and travellers, by J. G. Bartholomew, F.R.G.S.; published by Ward, Lock & Co. Cloth 2s. net.

(2) *Geological Map* of Scotland by Sir Archibald Geikie, D.Sc., LL.D., F.R.S., late Director-General of the Geological Survey of Britain, published by John Bartholomew & Co., now out of print.

(3) Stanford's *Geological Atlas* of Great Britain, with plates of characteristic fossils preceded by a description of the geological structure of Great Britain and its counties; and of the features observable along the principal lines of railway, by Horace B. Woodward, F.R.S., F.G.S.; published by Edward Stanford, 12-14 Long Acre, London, W.C., price 12s. 6d. net.

(4) *Handbook of the British Flora*: A description of the Flowering Plants and Ferns indigenous to, or naturalised in, the British Isles, by George Bentham, C.M.G., F.R.S., revised by Sir J. D. Hooker, K.C.S.I., C.B., F.R.S., late Director of the Royal Gardens, Kew; and published by L. Reeve & Co., price 12s. 6d. net.

(5) *Illustrations of the British Flora*: A series of wood engravings, with dissections of British Plants, drawn by W. H. Fitch, F.L.S., and W. G. Smith, F.L.S.; published by L. Reeve & Co., price 12s. 6d. net.

The above books have been used by me for many years and found of authoritative practical value and the best investment for all earnest students of the British Isles.

(6) The recent *Bird Book for the Pocket*, by Edmund Sandars, published by Oxford University Press at 7s. 6d., treats of all the regular British species, with coloured plates to scale and an illustrated chapter on eggs, and will be found concise and very helpful for identification and full information in a handy form. Finally, have few but the best books and know them thoroughly. Adopt the tortoise procedure, slow, little by little, regularly, and accurate observation and description in simple English. See the thing first, if possible, then read description and describe thereafter. Thus one may educate oneself and help others thereby to educate themselves also, at little financial expense, at home and in the field—making mountains, valleys, rivers, lochs, lands, plants, animals, and man tell and deliver up their wondrous enchanting tales that interest all the days of life, with infinite variety of objects of nature, open daily free to all with ordinary senses and faculties of humanity.

## J.—ART GALLERY AND MUSEUM; MEDALS; AND CHILDREN'S GALLERY

### ART GALLERY AND MUSEUM.

(A letter published by me, dated 1st January 1935, in *Ayrshire Post*):

Perth Corporation is to open this year a combined art gallery and museum, money having been gifted therefor; and the curator of the old museum has been appointed director of both.

Ayr Corporation is fortunate in having Belleisle Mansion with good environment and splendid accommodation for both purposes. The fine entrance hall with rich carvings, magnificent adjoining rooms, large billiard-room, also richly carved, and several others would be most appropriate for art gallery; while the smaller but more numerous rooms serve for museum, golf, caretaker, custodian, curator. All art and museum material, now congesting Carnegie Library, could be removed thither in course of time, and the library occupy the available space with the lecture hall as at present.

The wooden ballroom, fitted with wireless and gramophone, could supply music for concerts, dancing, exhibitions, meetings, shelter and rest, and other public purposes, and be provided with folding seats.

The derelict vinery might be made into conservatory with windows around, cement floor, glass roof, potted plants around walls, buffet at one end, plaster cast of Burns restored and put aloft at the other end, wireless and gramophone, folding seats, and door opening into and overlooking gardens, aviary, golf course to Rozelle. Thus all buildings, beautiful without and within, would do great and good services to bodies and brains of myriads of visitors from many lands for many years for moderate outlay of money. May the initial expense be defrayed, as at Perth, by some generous friend of Ayr and lover of mankind, in memory of the man that sang: "Whan man tae man the warl' ower shall brithers be for a' that."

### MEDALS FOR GEOLOGICAL RESEARCH.

The Council of the Geological Society of London made these awards, published in the *Scotsman* on 11th January 1935:

The *Wollaston* Medal to Sir John Smith Flett, K.B.E., M.A., LL.D., D.Sc., M.B., C.M., F.R.S.S. (Lond. and Edin.), Director of H.M. Geological Survey, for his researches "concerning the mineral structure of the earth" in the realms of petrographical, palaeontological, and stratigraphical geology. Sir John Flett, an Orcadian, was a student at George Watson's College and Edinburgh University. After a period as assistant to Professor James Geikie and Lecturer in Petrology in the University, he joined the Geological Survey. He was in charge of the Geological Survey of Scotland from 1911 to 1920.

The *Murchison* Medal to Edward Battersby Bailey, M.C., M.A., F.R.S.S. (Lond. and Edin.), Professor of Geology in the University of Glasgow, "for his researches in stratigraphical and tectonic geology."

## ART GALLERY AND MUSEUM

### CHILDREN'S GALLERY.

D. Wotherspoon, Taxidermist, Royal Scottish Museum, Edinburgh, wrote thus to me on 22nd January 1935:

"I have been very busy for the past two years building groups and making models for the Children's Gallery. However, at last they are completed, and by Saturday I will have everything ready for the opening on Monday.

"The educational authorities have taken a great interest in it, and Mr. MacKechnie, the Head, will be there with the Lord Provost. Altogether we expect about five or six hundred people there.

"The main exhibit is the large shore-bird case, and, I only finished it to-day. It took me a long time to shoot the birds and some very hard work. However, it is well worth the trouble.

"I feel sure that when you are in Edinburgh next time you will appreciate all the work that has been done for the children, after I have taken you round the various exhibits.

"The school teachers are looking forward to visiting it with their pupils, for it will fill a long-felt want and, after all, it is the young folk we must get at. As you say, the knowledge that some of the school children possess is really astounding. We see many examples of it, and I think by interesting them in nature you are building on a sure foundation.

"It is good to get a letter like yours, and it makes one feel that they are at least helping to lay that foundation."

The *Scotsman*, on 29th January 1935, states about the opening of the Children's Gallery:

"The Lord Provost described the Children's Natural History Gallery as the first of its kind in the British Isles and possibly in Europe. He hoped that the co-operation that already existed between the museum and the schools would become closer, and that the Gallery would be the means of extending and deepening the interest of the children, and later of the adult population in the museum. The foundation of the Gallery was due to the happy combination of three essential factors: a sympathetic director, an available hall, and a keeper of the Natural History department, who had not only the necessary knowledge of the subject, but also a love for and understanding of children. The present keeper combined these two qualities to a marked degree.

"In this matter Europe had been forestalled by America. In 1899 a children's museum was started by the Smithsonian Institution of North America, and since then about half a dozen had sprung into existence in that country, where in those happier days it was easy to get money for such subjects.

"But the establishment of the Edinburgh Children's Gallery was not so easy. The ordinary work of the museum had to be carried on, no special staff was available, and but little money could be spared for the project. In fact, all sorts of expedients had to be resorted to; much of the casing was made up of old material reconstructed by the museum staff, while old specimens were taken out of the store and furbished anew. Further, in the American museums, a large staff was always available to help the children, lead them along the path of learning, and make it smooth for them.

"But in Edinburgh they could afford no such helpers, and, consequently, the specimens must be arranged so that, with the aid of the pictures, they told the whole story even to the youngest child. The other children could obtain help and further information from the clearly printed and simply expressed labels."

Such, too, was the Alexander Collection, as the catalogue can prove; and functioned admirably, as a quarter million visitors from thirty countries testify, until upset and removed from Belleisle Mansion to Carnegie Library, Ayr.

## K.—“NATURE STUDY,” by Professor Ritchie

Professor James Ritchie, Marischal College, Aberdeen, who succeeded Sir J. Arthur Thomson, who succeeded H. Alleyne Nicholson, who was my professor in Natural History at St. Andrews in 1881-82, said in his address to Ayrshire teachers at Ayr on 15th February 1935:

“This subject in the schools was floundering. Outside the schools never had so much interest been taken in nature. Where the old nature study failed was in being a jumble rather than a connected whole. The child had an instinctive interest in living things, and new interests grew as the child developed. Nature study was said to develop sensory acuteness and precision of observation, to educate and unfold the natural spirit of the child, to be a brain-developing discipline, to cultivate love of beautiful things, to deal with activities which were intertwined with human activities; but if only nature study could lay the foundations of an abiding interest which was to make the whole life of the child, and, better still, the life of the man, a thing more full of pleasure and satisfaction for himself and others, that would justify its inclusion in the school curriculum. They must make direct appeal to nature. Not from books. If one get away from the real thing, there was danger of becoming wooden or prosy or inaccurate, or all three.

“The grading would fall into three stages. At first the simple recognition of common objects and the parts of the objects as seen in the school museum or brought by the pupils, or seen in half an hour’s walk. Such simple enumeration was sufficient to hold the interest of young pupils for several years. Secondly came the observation of life itself, movements and habits; and, finally, the investigation of structure of plant or animal in its relationship to its mode of life. The aim should be to promote close and accurate observation—a habit which would spread into other fields—and to induce reflection and breed understanding of the world we live in and are part and parcel. Life should be the keynote and be in the foreground or background of every lesson. The result of a properly devised and well-taught nature study would be a life-long pleasure in country things and the growth of that feeling of sympathy with other things—plants and animals—which shared with us the unique property of living, which was the basis of all the finer feelings of humanity.