

The Old Trinity Hospital, Physic Garden
Seen in the Foreground



# NOTES FROM THE ROYAL BOTANIC GARDEN EDINBURGH

VOL. XIX

Including Numbers XCI-XCV

1933-1938

With Plates CCXLVIII-CCLVIII and Twenty-one Figures in the Text

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# THE ROYAL BOTANIC GARDEN, EDINBURGH.

The Royal Botanic Garden, Edinburgh, is one of two Gardens maintained by the State in the United Kingdom, the other being the Royal Gardens at Kew in England. It occupies an unequally-sided quadrilateral area of 60·78 acres (bounded upon all sides by public roads and dwelling-houses) on the north side of Edinburgh—about a mile from the shore of the Firth of Forth. Its highest point, at Inverleith House—the official residence of the Regius Keeper of the Garden—towards the north-west, is 109 feet above sea-level, and thence the ground falls away on all sides. The lowest point—a depression 48 feet above sea-level, with an east and west trend through the middle of the Garden—is the site of an old bog, and the ground rises again to the south of the depression. The surface soil is generally alluvial sand resting on clay at considerable depth. In the lower part of the area the clay comes to the surface.

There are two entrances to the grounds—one upon the east side from Inverleith Row into the **Garden**, the other upon the west side from Arboretum Road into the **Arboretum**. The entrance to the **Laboratories**, **Lecture Halls**, **Library**, and to the **Office** for Garden business is from Inverleith Row.

The Garden is open daily (except Christmas Day) from 9 a.m. on Week-days and from 11 a.m. on Sundays until sunset (during "Summer Time" one hour before sunset).

The **Plant-Houses** are open daily from **1 p.m.** until **5 p.m.**, or until sunset if this be earlier.

The Museum is open on Week-days from 9 a.m. until 5 p.m. and on Sundays from 1 p.m. until 5 p.m.

The Herbarium is open on Week-days from 9 a.m. until 5 p.m., excepting Saturday, when it is open until 1 p.m.

The Library is open on Week-days from 9 a.m. until 5 p.m., excepting Saturday, when it is open until 1 p.m.

The Office for transaction of business with the Public and with Tradesmen is open on Week-days from 9 a.m. until 5 p.m., excepting Saturday, when it is open until 1 p.m.

[Notes, R.B.G., Edin., July 1938.]

#### Instruction and Research.

#### Botanical Department of the University.

From the foundation of the Garden, in 1670, the offices of Regius Keeper of the Royal Botanic Garden and Professor of Botany in the University of Edinburgh have been held by the same person, and it has become the custom that the students of the University come to the Garden for instruction in Botany. The whole work of the Botanical Department of the University is carried out in the Garden by the University Staff.

#### Instruction Course for Student Gardeners.

In the year 1892 the Board of Agriculture assigned a small grant to the Royal Botanic Garden towards the institution of a Course of Instruction in the Sciences underlying the Practice of Horticulture and Forestry for the benefit of young men desiring to become Gardeners and Foresters. The fact deserves record, because it marks the introduction into Scotland of a systematised effort to provide scientific instruction in Gardening and Forestry.

The Course of Instruction in theory and in practical work extends to three years, and the curriculum includes Botany, Propagation of Garden Plants, Plant Pathology, Chemistry and Physics, Entomology, Soils and Geology, Meteorology, Surveying and Mensuration, Bookkeeping, Horticulture, and Forestry.

A Diploma is awarded to Student Gardeners, probationers, who obtain a high percentage (75 per cent.) of marks in the examination of the course and who show proficiency in their practical work.

Applicants for admission to this course must have had practical experience in gardening or forestry, must be not over 25 years of age, they must furnish a medical certificate of fitness, and must be unmarried and remain so during their period of service. A grant in aid (subsistence allowance) will be given to each Probationer.

Forms of application for admission to this course with full particulars can be obtained from the Regius Keeper, Royal Botanic Garden, Edinburgh.

#### Facilities for Research.

The Laboratories are open to anyone desirous of undertaking Botanical Research.

The Museum, temporarily housed in two huts, contains a series of exhibits illustrating the form and life history of plants, and these are arranged so as to facilitate their use in teaching.

The Library contains over seventeen thousand volumes. The leading botanical and horticultural periodicals are received and may be consulted by the public. Books are not lent from the Library.

The Herbarium is situated in the southern portion of the garden. It contains a fair representation of the floras of the world, and is particularly rich in representatives of the Asiatic floras.

#### Specimens for Private Study.

Specimens for private study are supplied, as far as the resources of the Garden will permit, to visitors, teachers, and students who make written application to the Regius Keeper. Application forms may be obtained at the office of the Garden, and should be handed in at least two days before the specimens are required.

#### Plants and Seeds are not sold from the Garden.

#### Publications.

In 1900 appeared the first number of **Notes from the Royal Botanic Garden, Edinburgh,** for the purpose of publishing reports upon the condition and progress of the Garden, records of scientific investigations carried on in the Garden, and notices of matters of interest relating to plant-life which have come under the observation of the Staff. The Notes are available in exchange for publications of kindred institutions, and are on sale at the Garden and may be purchased either directly or through any Bookseller from H.M. Stationery Office (Scottish Branch), 120 George Street, Edinburgh. The parts are not issued at fixed periods. Nineteen volumes have been completed.

The Royal Botanic Garden, Edinburgh—a brief descriptive and illustrated account (18. net) and Map with a Key Plan and Index to the Royal Botanic Garden, Edinburgh (3d. net) may be purchased at the gates of the Garden or from H.M. Stationery Office.

A Seed List containing the names of the plants cultivated from which seeds have been collected during the year is published in December. The seeds are available for exchange.

### REGIUS KEEPERS (R.K.)

#### from the date of

#### FOUNDATION OF THE GARDEN.

JAMES SUTHERLAND			٠	Born 1639? R.K. 12th January 1699.* Not confirmed 1714. Died 24th June 1719.
WILLIAM ARTHUR .		•		Born September 1680. R.K. 10th May 1715. Died 1716.
Charles Alston .				Born 24th October 1685. R.K. 30th June 1716. Died 22nd November 1760.
Јони Норе	•			Born 10th May 1725. R.K. 13th April 1761. Died 10th November 1786.
DANIEL RUTHERFORD				Born 3rd November 1749. R.K. 20th December 1786. Died 15th December 1819.
Robert Graham .				Born 7th December 1786. R.K. 31st January 1820. Died 7th August 1845.
John Hutton Balfour				Born 15th September 1808. R.K. 8th November 1845. Retired, 1880. Died 11th February 1884.
ALEXANDER DICKSON				Born 21st February 1836. R.K. 28th April 1880. Died 30th December 1887.
Isaac Bayley Balfour				Born 31st March 1853. R.K. 5th April 1888. Retired, 5th April 1922. Died 30th November 1922.
WILLIAM WRIGHT SMITH				Born 2nd February 1875. R.K. 21st April 1922.

<sup>\*</sup> This is the date of a Royal Warrant from William III., and no earlier one has been found.

## Principal Gardeners (P.G.), Head Gardeners (H.G.) or Curators from the Year 1756.

John Williamson .		P.G. 1756? Died September 1780.
MALCOLM M'COIG .		P.G. 1st January 1782? Died 25th February 1789.
ROBERT MENZIES .	inia Ger	P.G. 1st October 1789. Died 22nd January 1800.
John Mackay	: 12077* u	Born 25th December 1772. P.G. February 1800. Died 14th April 1802.
George Don		Born October 1764? P.G. 1st October 1802. Resigned 31st December 1806. Died 15th January 1814.
THOMAS SOMMERVILLE		Born 1783? P.G. 1807? Died 17th March 1810.
WILLIAM M'NAB .	k dasa	Born 12th August 1780. P.G. April 1810. Died 1st December 1848.
JAMES M'NAB		Born 25th April 1810. P.G. 1st January 1849. Died 19th November 1878.
John Sadler		Born 3rd February 1837. Curator 13th January 1879. Died 9th December 1882.
ROBERT LINDSAY .		Born 7th May 1846. Curator 3rd March 1883. Retired 31st March 1896. Died 24th September 1913.
Adam Dewar Richardso	Ν.	Born 12th September 1857. H.G. 1st April 1896. Resigned 31st May 1902. Died 5th January 1930.
ROBERT LEWIS HARROW		Born 26th March 1867. H.G. 1st June 1902. Curator 1st February 1924. Resigned 30th September 1931.
Laurence Baxter Stews	ART .	Born 7th February 1876. Curator 1st October 1931. Died 30th January 1934.
ROLAND EDGAR COOPER		Born 16th June 1890. Curator 10th March 1934.

#### Staff of the Royal Botanic Garden, Edinburgh, at July 1938.

Regius Keeper		Sir William Wright Smith, Kt., M.A., D. ès Sc., F.L.S., F.R.S.E.
Assistant Keeper	Bio	John Macqueen Cowan, M.A., D.Sc., B.A.(Oxon), F.L.S., F.R.S.E.
Assistant in Herbarium .		William Edgar Evans, B.Sc., F.R.S.E.
Assistant in Laboratory	i hoi	. Matthew Young Orr, F.R.S.E.
Assistant in Library .	LICTO	James Todd Johnstone, M.A., B.Sc.
Assistant in Museum .		Harold Roy Fletcher, B.Sc., Ph.D.
Assistant in Studio .		. Robert Moyes Adam, F.L.S.
Curator		. Roland Edgar Cooper, F.R.H.S.
Assistant Curator		David Wilkie
Clerical Assistant		Jean Brockie
Do		David Ramsay Oliver
Shorthand-Typist		Edna Louise Linsell
Medical Officer		. James Walter M'Donald, M.B.
		Will C M T
Senior Foreman		William Gregor MacKenzie
Foreman of Arboretum .		Charles Lamont
Foreman of Glass Departme	ent	James John Campbell
Foreman of Propagating De	epar	tment . Edward Edmund Kemp

# Staff of the Botanical Department of the University of Edinburgh.

	Professor of Botany Sir William Wright Smith, Kt., M.A., D. ès Sc., F.L.S., F.R.S.E.
-	Reader in Mycology and Bacteriology . Malcolm Wilson, D.Sc., F.L.S., F.R.S.E.
	Lecturer on Forest Botany John Anthony, M.C., M.A., B.Sc.
	Lecturer on Botany James Lindsay Salmond Smith, M.A., B.Sc.
	Lecturer on Plant Physiology and Alexander Nelson, B.Sc., Ph.D., Agricultural Botany N.D.A., F.R.S.E.
	Assistant Arthur Stanley Boughey, B.Sc.
	Assistant Eric Vernon Watson, B.Sc., Ph.D.

#### Visitors to the Royal Botanic Garden, Edinburgh, 1889-1937.

On the 1st of April 1889, the control of the Royal Botanic Garden, Edinburgh, was vested in the Commissioners of His Majesty's Works, and the Garden became subject to the "Act for the Regulation of the Royal Parks and Gardens, 1872." From the date specified the Garden has been opened to the public on Sundays, and also for an extended period on Week-days.

Year.	Total in Year.	Total on Sundays.	Largest Number on a Sunday.	Smallest Number on a Sunday.	Total on Week-days.	Largest Number on a Week-day.	Smallest Number on a Week- day.
*1889	368,219	187,457	13,935	129	180,762	3,834	50
1890	446,540	216,345	11,262	91	230,195	4,032	65
1891	454,083	220,543	9,445	340	233,540	3,228	76
1892	437,205	218,233	13,581	149	218,972	2,666	43
1893	531,232	271,893	12,860	45	259,339	3,197	40
1894	526,948	268,793	13,515	68	258,155	3,153	28
1895	516,608	264,497	15,227	127	252,111	5,292 3,825	
1896	516,407	296,576	13,517	527	219,831 203,480	3,153	30
1897	475,210	271,730 258,499	16,001	74	184,790	3,234	39
1899	461,686	259,424	15,161	105	202,262	2,758	30
1900	561,359	324,856	17,700	268	236,503	3,667	53
1901	586,461	339,229	19,256	258	247,232	4,627	45
1902	522,363	295,892	15,561	165	226,471	5,461	60
1903	606,184	355,310	19,583	135	250,874	4,202	41
1904	639,066	367,290	20,719	374	271,776	3,564	42
1905	584,546	330,995	19,859	100	253,551	2,708	60
1906	699,558	394,030	21,959	84	305,528	3,760	44
1907	674,208	422,899	25,601	708	251,309	3,365	40
1908	585,171	342,106	20,549	570	243,065	2,898	39
1909	683,243	394,861	24,334	165	288,382	3,483	71 80
1910	777,864	430,776	21,813	244	347,088	3,598	66
1911	708,943	420,163	22,765	82 88	288,780 330,694	3,828	81
1912	714,170 876,585	383,476 500,205	25,930 27,398	680	376,380	3,515	59
1913	776,280	414,518	25,521	106	361,762		62
1915	730,761	442,179	21,155	125	288,582		55
1916	695,364	367,713	20,227	98	327,651	3,926	41
1917	737,070	428,752	21,531	170	308,318	3,293	59
1918	727,782	320,450	20,811	236	407,332	3,911	39
1919	811,937	436,055	21,775	231	375,882	6,274	52
1920	644,856	399,398	19,340	481	245,458	3,777	84
1921	702,481	418,832	20,892	797	283,649		48
1922	816,272	369,636	23,979	519	446,636		71
1923	782,175	427,155	22,423	549	355,020		108
1924	697,463	397,918	19,964	574	299,545		128
1925	835,955	490,029	21,893	173	345,926		38
1926	851,904	486,653	21,725	633	365,251		68
1927	806,928	474,763	22,109	340	332,165		96 41
1928	865,559 946,630	448,476	19,840	388	417,083	AND RESIDENCE AND ADDRESS OF THE PARTY OF TH	114
1929	951,949	470,900	24,284	379	475,739 512,948		46
1931	1,036,132	394,021	18,530	868	642,111		52
1932	1,001,055	426,023	18,887	265	575,032	The same of the sa	45
1933	993,139	414,428	20,133	508	578,711		135
1934	944,549	428,170	18,460	162	516,379		99
1935	891,766	397,542	20,327	59	494,224		87
1936	947,091	386,672	18,545	265	560,419		32
1937	875,425	372,620	17,586	250	502,80		41
Total	34,467,671	18,087,982			16,379,689		

<sup>\*</sup> Numbers in this year for nine months only.