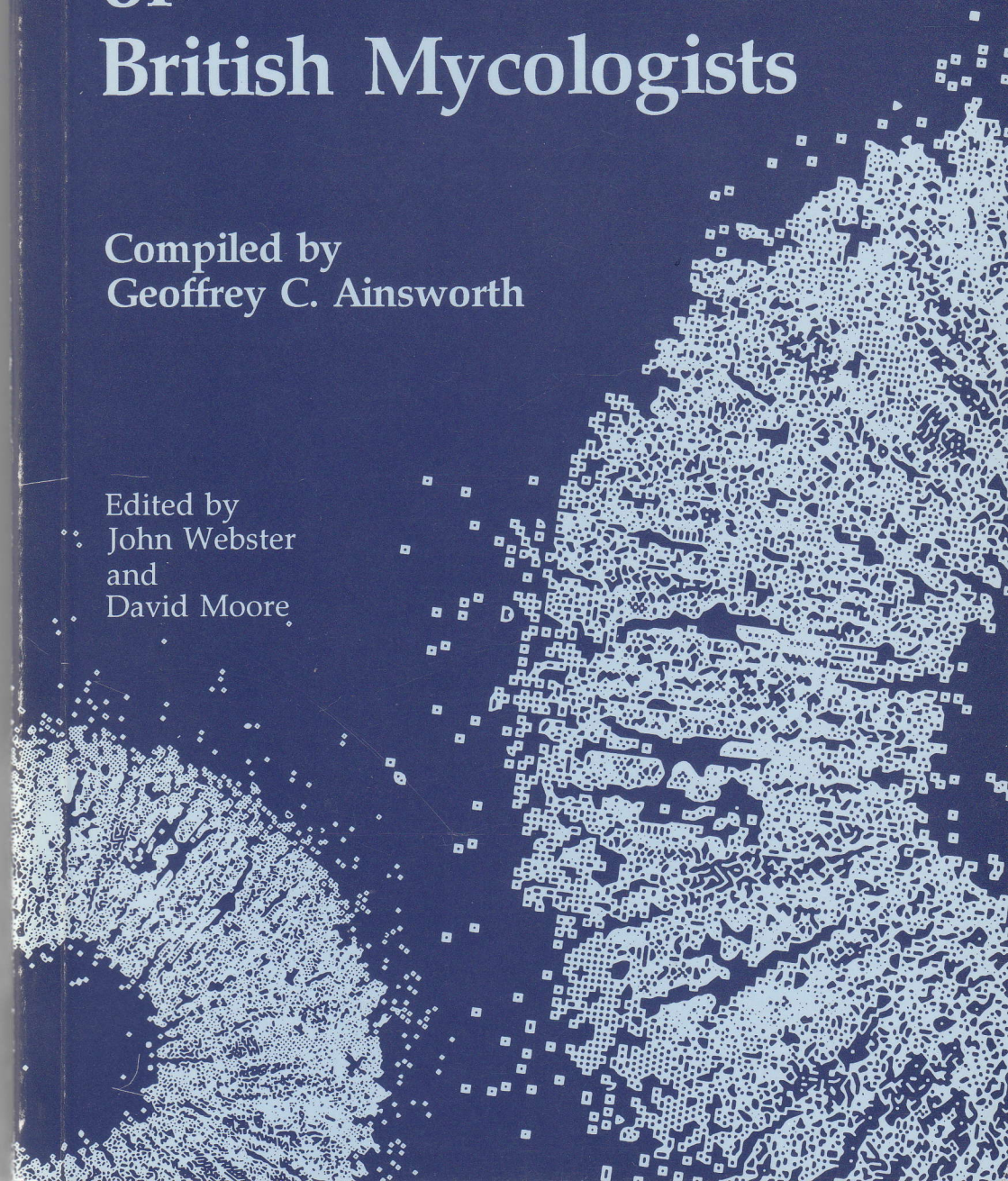


Brief Biographies of British Mycologists

Compiled by
Geoffrey C. Ainsworth

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Introduction

This book attempts to give concise biographical details of those who have made a significant or interesting contribution to the mycology of the British Isles from the time of the herbalists to the twentieth century.

Up to the mid-nineteenth century contributions to British mycology and lichenology were made by amateurs particularly country clergymen and medical men, with an interest in natural history, and for the past two hundred years there have always been some amateur mycologists who have achieved professional expertise, if not in general mycology, in certain groups such as the larger basidiomycetes, discomycetes, rusts, myxomycetes (mycetozoa), etc. These latter are included as is a selection of other amateur naturalists, particularly those associated with the Woolhope Club, the Yorkshire Naturalists' Union, the Essex Field Club, and the Norfolk & Norwich Naturalists' Society. The main core of the compilation is a series of 'Brief Lives' of those trained mycologists who since the closing years of the nineteenth century were employed by museums, universities, and other institutions and who contributed so much to the knowledge of mycology of the British Isles. At the end of the book, the biographical compilation is complemented by lists showing the geographical distribution of the mycologists mentioned in the text and the Institutes, Laboratories and Societies which they represented. Finally, there is a list of exsiccati of fungi and lichens.

In Great Britain, until the establishment of the National Agricultural Advisory Service (now incorporated in the Agricultural Development and Advisory Service) in 1946, the designation 'mycologist' was somewhat ambiguous. In 1918, at the end of the First World War, the then Board of Agriculture instituted an agricultural advisory service, designating the regional plant pathologists 'advisory mycologists', even though their specialization might be in bacterial or virus diseases of plants. The more important of these plant pathologists have been included (including a few who specialized in plant pathogenic bacteria or viruses), as have a number of plant pathologists trained in the British Isles who were posted on a career basis to overseas territories as 'mycologists' (plant pathologists) where they frequently assiduously studied the local fungi and made collections which greatly enriched British herbaria such as that at the Royal Botanic Gardens, Kew. A number of the expatriate plant pathologists finally returned to the British Isles to take up diverse senior posts.

The compilation has been supplemented by inclusion of certain medical practitioners, and a few veterinarians, who have specialized in fungus diseases of man and animals.

For various reasons the cover is incomplete. One reason is that collection of information came to an end about 1990, so currently active, and recently deceased, mycologists are not represented. Another reason is that biographical details could not be traced for some amateur mycologists (and some professionals) who were the authors of significant publications. Difficulty was also encountered in deciding at what point to omit amateur naturalists who, though they published nothing of great significance, had in their time a local reputation for specializing on fungi.

To the user

The entries are arranged in alphabetical order of family name and have been standardized as far as possible. For every entry an attempt has been made to cite all the forenames (and when appropriate the maiden name), and the years of birth and death.

For professional mycologists, the career is summarized, usually with an indication of area of special interest. For amateurs, the occupation or profession is indicated, as is the geographical region where the subject lived or collected, and the specialization or particular contribution is mentioned.

References are quoted (*in italic type*) at the end of many entries. These indicate inclusion of the subject in the *Dictionary of National Biography* or the *Dictionary of Scientific Biography*, for Fellows of the Royal Society reference will be made to the official Royal Society biographical notice, there may be selected obituary or other biographical notice(s), and finally, when possible, reference is made to Desmond (1977) and also Britten & Boulger (1931; see full citations below)

To obtain the maximum information about any subject, reference should be made to any other names in bold face type included in the entry.

REFERENCES

(Cited in the text by author and date)

- Ainsworth, G. C. (1976). *Introduction to the History of Mycology*. Cambridge University Press: Cambridge, U.K.
- Ainsworth, G. C. (1981). *Introduction to the History of Plant Pathology*, Cambridge University Press: Cambridge, U.K.
- Ainsworth, G. C. (1987). *Introduction to the History of Medical and Veterinary Mycology*. Cambridge University Press: Cambridge, U.K.
- Ainsworth, G. C. & Stockdale, Phylis H. (1984). Biographical notices of deceased medical and veterinary mycologists. *Rev. Med. Vet. Mycol.* **19**: 1-13.
- Ainsworth, G. C. & Waterhouse, Grace M. (1989). British county foray lists (up to the end of 1986), 35 pp. British Mycological Society.
- Arber, Agnes (1938). *Herbals: Their Origin and Evolution* (edn 2). Cambridge University Press: Cambridge, U.K.
- Barnhart, J. H. (1965). *Biographical Notes upon Botanists*, 3 vol. Boston: Mass., U.S.A.
- Blackwell, Elizabeth M. (1961). Links with past Yorkshire mycologists. *Naturalist* 1961: 53-66.
- Blackwell, Elizabeth M. (1961). Fungus forays in Yorkshire and the history of the Mycological Committee. *Naturalist* 1961: 163-68.
- Blackwell, Elizabeth M. (1966). Alfred Clarke, his herbarium, and the birth of the British Mycological Society. *News Bull. BMS* 25: 13-20.
- Cooke, G. J. (1937). Some Norfolk botanists and their contributions to British mycology. *Trans. Norf. Norwich Nat. Soc* **14**: 191-209.
- Gilbert, O. L. (1980). A lichen flora of Northumberland. *Lichenologist* **12**:325:9.
- Hassell, F. C. (1957) The early Irish mycologists 1726-1900. *Irish Naturalist J.* **12**: 116-20.

- Hawkesworth, D. L. & Seaward, M. R. D. (1973). *Lichenology in the British Isles 1568-1975*. CMI: Richmond, Surrey.
- Lindau, G. & Sydow, P. (1908-17). *Thesaurus Litteraturae Mycologicae et Lichenologicae*, 5 vol. Leipzig.
- McKay, R. (1957). Pioneer workers in the field of plant pathology in Ireland and a list of papers on plant disease investigations in Ireland prior to 1940. *J. Dept. Agric. Ireland*, **48**: 5-31.
- Muskett, A. E. (1976) Mycology and plant pathology in Ireland, *Proc. Roy. Irish. Acad.* **76** Sect. B: 393-472 (with a bibl. of 1355 entries).
- Oliver, F.W. (ed.) (1913) *Makers of British Botany*. Cambridge University Press: Cambridge, U.K.
- Pattison, I. (1983). *The British Veterinary Profession, 1791-1948*. 207 pp.. London.
- Ramsbottom, J. (1932). The history of mycology in Essex. *Essex Naturalist* **24**: 167-78, 222-33, 268-96.
- Ramsbottom, J. (1963). History of Scottish mycology. *Trans. British. Mycol. Soc.* **46**: 161-78.
- Ramsbottom, J. (1953). *Mushrooms and Toadstools*. Collins: London.
- Seaward, M. R. D. (1987). 300 years of Yorkshire lichenology, *Naturalist* **112**: 37.
- Watling, R. (1982). The British Mycological Society: the Yorkshire connection. *Naturalist* **107**: 121-9.
- Watling, R. (1986). 150 years of paddock stools: a history of agaric ecology and floristics in Scotland. *Trans. Bot. Soc. Edinb.* **45**: 1-42.

Abbreviations

AAB	Annals of Applied Biology
BB	Britten, J. & Boulger, G. S. (1931). <i>A Biographical Index of Deceased British and Irish Botanists</i> (revised by A. B. Rendle).
bibl.	bibliography
Biogr. RS	Biographical memoirs of fellows of the Royal Society, 1 (1955) onwards.
BM	international coding for herbarium of the Natural History Museum, (South Kensington, London) which was formerly the British Museum (Natural History).
BMJ	British Medical Journal.
BMS	British Mycological Society.
D	Desmond, <i>Dictionary of British and Irish Botanists and Horticulturalists</i> , 1977 (a revision and extension of BB).
DNB	<i>Dictionary of National Biography</i> , Compact edition, 2 vol., 1975. Supplements are dated, e.g. <i>DNB</i> (1961-70).
DSB	<i>Dictionary of Scientific Biography</i> , 1-16 , 1970-76.
E	international coding for the herbarium of the Royal Botanic Gardens, Edinburgh.
ed.	editor.
edn	edition.
fasc.	fascicle.

K	international coding for the herbarium of the Royal Botanic Gardens, Kew.
Obit. RS	Obituary notices of fellows of the Royal Society, 1-9 (1933-54).
port.	portrait.
Proc. LS	Proceedings of the Linnean Society of London.
Proc. RS	Proceedings of the Royal Society of London.
SC	Stafleu, F. A. & Cowan, R.B. (1976-88). <i>Taxonomic Literature</i> , edn 2, 7 vols.
TBMS	Transactions of the British Mycological Society.
Times	The Times, London.
WW	Who's Who.
WWW	Who Was Who.

Acknowledgements

My indebtedness to Ray Desmond's *Dictionary of British and Irish Botanists and Horticulturalists*, 1977 (a revision and expansion of the 2nd edition (by A. B. Rendle) of J. Britten & G. S. Boulger's *A Biographical Index of Deceased British and Irish Botanists*, 1931) will be very apparent.

I also acknowledge my indebtedness to Ramsbottom (1963) and Watling (1986) for information about Scottish mycologists, Musckett (1976) for Irish mycologists, Blackwell (1961, 1966), Ramsbottom (1932), and G. J. Cooke (1937) for mycologists associated with Yorkshire, Essex, and Norfolk respectively, and to Hawksworth & Seaward (1977) and Seaward (1987) for work by lichenologists.

The late W. C. Moore, of the Ministry of Agriculture's Plant Pathology Laboratory, Harpenden, kept a loose-leaf file of biographical details of British mycologists and plant pathologists, particularly those associated with the Ministry's advisory service. After his death some additional details were added by the late F. Joan Moore and by Margaret Holden. I have had access to this file (now the property of the British Mycological Society) and it provided some useful details.

The Editors would like to thank Mrs Linda Eggins who transcribed the original manuscript into word processor files with great accuracy.

A

- ABBOT** (Rev. Charles; ca 1761-1817), MA (Oxon., 1788), DD (Oxon., 1802), FLS (1793), botanist, was vicar of Oakley Reynes, then Goldington, Beds., and died at Bedford. The list of fungi in his *Flora Bedfordiensis*, 1798: 278-351 was revised by **E. M. Holmes & J. Hamson** in 1904. *DNB I: 1; SC I: 1; D: 1 (BB: 1)*.
- ADAMS** (Alfred; 1866-1919), of Looe, Cornwall, specialized in myxomycetes and his finds (82 spp. and 2 var.; including *Physarum nucleatum*) were published posthumously by Miss **G. Lister** (*J. Bot. 1920: 127-30*). *D: 2 (BB: 2)*.
- ADAMS** (George; 1720-86), a London mathematical instrument maker. Author of *Micrographia Illustrata*, 1746 (edn 4, 1771). Father of **G. Adams** (1750-95). *DNB I: 9; D: 3 (BB: 2)*.
- ADAMS** (George; 1750-95), FLS (1788), a London mathematical instrument maker. Author of *Essays of the Microscope with a view of Organization of Timber*, 1787 (edn 2, 1798). Son of **G. Adams** (1720-86). *DNB I: 9; D: 3 (BB: 2)*.
- ADAMS** (John; 1872-1950) after graduating from Cambridge (St John's College) was lecturer in botany at the Dublin Municipal Technical Schools, assistant professor at the Royal College of Science for Ireland, and professor of botany at the Royal Veterinary College of Ireland before emigrating to Canada where he was Assistant Dominion Botanist from 1914-38. With **G. H. Pethybridge** he published a census catalogue of Irish fungi (*Proc. Roy. Irish Acad. 28 (B4): 120-66, 1910*) and during 1908-14 many papers on Irish plant diseases (see Muskett (1977): 437 *et seq.*). *WWW (1941-50): 6; D: 3*.
- ADAMS, S. C.**, see **Beck, S. C.**
- ADAMSON** (Horatio George; 1865-1955) was physician for diseases of the skin to St Bartholemew's Hospital, London. Noted for his investigations on ringworm (*Brit. J. Derm. 7: 202-11, 237-44, 1895*) and as a result the downward growing hyphae in a dermatophyte-invaded hair (which he was the first to describe) was named 'Adamson's Fringe' in his honour. During the opening years of the 20th century Adamson popularised in London X-ray treatment for ringworm of the scalp in children which greatly reduced the time taken to cure tinea capitis at the Metropolitan Asylums Board's school for ringworm affected children at Greenwich (*Ibid. 22: 46-49, 1910*). See also H. G. Adamson, *Skin Affections of Childhood*, 1907 (London). *BMJ 1955 2: 206-7, port.; Lancet 1955 2: 147, port.; Ainsworth & Stockdale (1984): 2*.
- ALCOCK** (Mrs Nora Lilian Leopard (née Scott); 1875-1972), plant pathologist, was daughter of Sir John Scott, Judicial Adviser to the Khedive of Egypt, (and granddaughter of Rowland Hill). In 1905 she married Professor N. H. Alcock (d. 1913), of the University of Quebec. After being widowed Mrs Alcock was assistant (librarian) at the Royal Botanic Gardens, Kew (1917-8), then assistant mycologist at the Board (Ministry) of Agriculture's Plant Pathology Laboratory,

Kew and Harpenden, and finally plant pathologist to the Department of Agriculture for Scotland at Edinburgh (1924-37). She pioneered work on 'red core' of strawberries (see **C. J. Hickman**) and, with **C. E. Foister**, compiled the first list of Scottish plant diseases (*Proc. Bot. Soc. Edinb.* **30**: 338-50, 1931). Awarded the MBE, 1931. *Bull. BMS* **6**(2): 81, 1972; D: 6.

ALEXANDER (William Thomas; 1818-72) of Cork was a surgeon in the Royal Navy serving on HMS *Plover* in the East Indies and China. In 1852 (*Phytologist* **4**: 393) he published a list (compiled by months from March to September) of 256 fungi

Figure 1. Horatio George Adamson (1865-1955)

found in Cloyne, Co. Cork. *Hassell* (1957): 118; *Muskett* (1976): 398; D: 7 (*BB*: 4).

ALLEGRO (John Marco; 1923-88), philologist, lecturer University of Manchester (1954-70), was an international expert on the Dead Sea Scrolls on which he wrote several books. In 1970 he published *The Sacred Mushroom and the Cross* in which it was claimed that Christianity and Judaism are derived from a cult in which hallucinogenic fungi played a part. The book aroused much controversy and according to the obituary notice in *The Independent* (24 February 1988, port.) 'made him a celebrity, but destroyed his standing as a serious scholar'. *WW* (1988): 23. (Modern interest in the hallucinogenic fungi stems from the scholarly and prolonged researches of the American banker Robert Gordon Wasson (1898-1986) and his Russian born wife, Valentina Pavlovna Wasson (née

Guerckner) (1901-1958), a pediatrician, which culminated in their handsomely produced 2-Volume *Mushrooms, Russia, and History*, 1957. Subsequently R. G. Wasson, with the help of Roger Heim (1900-79), of the Paris Natural History Museum, did much to elucidate the mycology of these forms in *Les Champignons Hallucinogènes du Mexico*, 1959, and in *Soma: the Divine Mushroom of Immortality*, 1968 (folio; 1971, octavo reprint) in which Wasson identified the Indian soma with *Amanita muscaria*, the fly agaric).

ALLEN (William Beriah; 1875-1922), pottery owner and amateur naturalist, was born at Benthall, Shropshire, educated at Ellesmore College and Hertford College Oxford (but never graduated). He inherited his father's Benthall Pottery works and developed a prosperous foreign china and glass trade. He was a Founder member of the BMS, a friend of **Carlton Rea**, and made a number of new British records. *Omphalia allenii* R. Maire and *Cudoniella allenii* A. L. Smith were named in his honour. See also **W. Phillips**. *TBMS* 8: 191-2, 1923; *D*: 8 (*BB*: 5).

ANDERSON (Sir Thomas McCall; 1836-1908) was a founder of Glasgow Hospital for Diseases of the Skin, 1861. In 1874 he was appointed to the new chair in clinical medicine at the University of Glasgow where, in 1900, he became Regius Professor of Medicine. Author of *On the Parasitic Affections of the Skin*, 1861 (edn 2, 1868), London; the first British book on ringworm. *DNB* 2: 2484; *BMJ* 1908 1: 355-6, *port.*; *Lancet* 1908 1: 468-71, *port.*; *Brit. J. Derm.* 50: 503-4, *port.*, 1938.

ANDREWS (William; 1802-88), botanist, was born at Chichester, Sussex, and died in Dublin and is best known for his contributions to Irish natural history. He was secretary and president of the Dublin Natural History Society and in 'Remarks on the fungi of the South West of Ireland' (*Nat. Hist. Rev.* 3: 45, 1856) describes *Polyporus (Piptoporus) betulinus* of which he could find no previous Irish record (Hassell (1957): 118-9). *DNB* 1: 35; *D*: 14 (*BB*: 8).

APINIS (Arvids-Eduards; 1907-79), Mag. rur. Nat. (Riga, 1933), was born in Katavara, Latvia, of farming parents. He studied at the University of Riga and from 1927 was assistant to Professor N. Malta (1890-c.1940), becoming subassistant in the Riga botanical garden (1930), and later moving to the Institute of Plant Physiology & Anatomy (1934). After the German invasion of Latvia in 1941, worked in Surau and Berlin. Returned to Latvia in 1945 and joined the Baltic University of Hamburg when Apinis took with him as a safety measure the Riga University herbarium and the botanical library of Professor Malta (4-5 tons in all) and later brought this material to England when he joined the University of Nottingham in 1948 as research assistant to Professor C. G. C. Chesters and where he later gained a PhD and became lecturer in botany. The Riga herbarium material was passed to the Latvian National Council in 1960 and the residue either added to the archives or library of the International Mycological Institute or disposed of on behalf of the Latvian National Committee in 1989. While at Nottingham Apinis published on a variety of topics, especially soil fungi and other aspects of mycological ecology. *Bull. BMS* 14: 70-1, 1980; *Intercom (IMI)* 38: 3, 1989.

- ARBBER** (Agnes (née Robertson); 1879-1960), DSc Lond. (1905), FLS (1908), FRS (1946), was born in London but after her marriage to the palaeobotanist E. A. N. Arber (1870-1918) in 1909 lived in Cambridge for the rest of her life. Although her main botanical publications were morphological Agnes Arber had a life-long interest on the history of botany and her book *Herbals, Their Origin and Evolution*, 1912 (edn 2, 1938; revised reprint, 1986) became a standard text on herbals and herbalists. *DNB 2*: 2485; *DSB 1*: 205-6; *Biogr. Mem. RS 6*: 1-11, *port., bibl.*, 1960; *SC 1*: 56; *D*: 16.
- ARCHER** (William; 1827-97). FRS (1875), librarian to the Royal Dublin Society (1876-95), was for many years secretary of the Dublin Microscopical Club (founded 1857). He had wide natural history interests and in 1865-6 published on *Saprolegnia* (see **Muskett** (1976): 398, 430 (19, 21)) (cf. **W. Frazer, Porte**) and in 1867-8 on chytrids parasitic on desmids and other algae (see *ibid.*: 431 (27-8, 31-2)) (cf. **J. Baker, E. P. Wright**). *DNB 2*: 2363; *Proc. RS 62*: xl-xlii, 1898; *SC 1*: 58; *D*: 17 (*BB*: 9).
- ARCHIBALD** (Sir Robert George; 1880-1953), bacteriologist and specialist on tropical medicine was appointed in 1910 to the Wellcome Tropical Research Laboratory, Khartoum (of which he became director, 1920-7) where he collaborated with **A. J. Chalmers** in studies on mycetoma. Later (1947), he became professor of bacteriology at Farouk University, Alexandria. *BMJ 1953 1*: 1112-3, 1169, 1337; *Lancet 1953 1*: 1004; *Ainsworth & Stockdale (1984)*: 2.
- ARDEN** (Lady Margaret Elizabeth (née Spencer-Wilson); 1768-1851), of Nork, Epsom, Surrey, who contributed to Sowerby & Smith's *English Botany* had mycological interests. *D*: 17 (*BB*: 9).
- ARDERON** (William; 1703-67), FRS (1745), a Norwich naturalist, published (*Phil. Trans.* **45** (487): 321-3, 1748) his observations on a fungal infection of a roach (*Leuciscus rutilans*), the first record of saprolegniosis. *DNB 1*: 46; *Ainsworth (1987)*: 3-5.
- ARNOLD** (Rev. Fredrick Henry; 1831-1906), Sussex botanist, contributed lichens and fungi of Sussex to the *Victoria History of the Counties of England*, 1905. *D*: 19 (*BB*: 10).
- ASHBY** (Sydney Francis; 1874-1951) was born at Rockferry, Cheshire, and studied first at the University of Liverpool and then Edinburgh from where he graduated. He gained post-graduate experience at Halle and Göttingen and after studying the bacteriology of water in Denmark was appointed Carnegie Research Fellow at Rothamsted Experimental Station. In 1906 he became microbiologist to the Government of Jamaica and held this position until 1921 when he was appointed professor of mycology at the Imperial College of Tropical Agriculture, Trinidad. Five years later he became senior mycologist at the Imperial Bureau of Mycology and finally Director of IMI, 1935-39. In Jamaica Ashby did valuable research on panama disease of banana (*Fusarium oxysporum* var. *cubense*) which had been introduced into Jamaica in 1911 and in Trinidad, in 1926, published (with **W. Nowell**) the results of a study of stigmatomycosis of cotton bolls caused by

insect-inoculated fungi. The genus *Phytophthora*, on which Ashby became an authority, was a long term interest but he never wrote up his extensive knowledge. While at IMB he was also involved in the early intermediate quarantine work at the Royal Botanic Gardens, inspecting banana material for transmission to the banana breeding centre in Trinidad. As Director of IMI he was remote, rarely left his room, and delegated the routine business of the Institute to **S. P. Wiltshire** and **H. A. Dade**. *Ashbya* Guilliermond, 1928, was named in his honour. *Nature* **173**: 802-3, 1954.

ASHWORTH (Dorothy; 1908-44), plant pathologist, was born at Prestwick, Lancs., and after schooling at Prestwick and Broughton, graduated from the Royal Holloway College in 1929. She then undertook research at Royal Holloway College (Driver Scholar), University College, Nottingham (PhD, 1934), and Manchester University and was finally appointed assistant to the mycologist at the Royal Horticultural Society's Gardens, Wisley (1935-44) where she undertook advisory and research work. She published on the cytology and biology of rusts (*TBMS* **16**, **19**). *Nature* **154**: 571-2, 1944.

ASHWORTH (James Hartley; 1874-1936. FRS (1917)), who was professor of natural history at Edinburgh University, published the classic monograph on *Rhinosporidium seeberi* (cause of the tropical disease rhinosporidiosis) from a study on an Indian student while resident at Edinburgh *Trans. Roy. Soc. Edinb.* **53**: 301-42, 1923). *Obit. RS.* **2**: 205-11, *port.*, 1936; *Nature* **137**: 304-5, 1936; *Ainsworth & Stockdale* (1984): 2.

ASTLEY COOPER (Mrs), see V. Rea.

ATWOOD (Martha Maria; *fl.* 1850-60), bryologist and lichenologist, of Clifton, Bristol, and Bath, contributed to **W. A. Leighton**, *Lichen-flora*, 1879. *D.* 23 (*BB*: 11).

AUBREY (John; 1626-97), a Wiltshire antiquarian who was one of the original Fellows of the Royal Society (1663), compiled biographical details about his contemporaries which were drawn on by Antony à Wood (who peevishly described Aubrey as 'a shiftless person, roving and magotieheaded, and sometimes little better than crazed') for his *Athenae Oxoniensis*, 1691-2. Their subsequent publication as *Brief Lives* (e.g. A. Clarke (Ed.), 1897-8, in 2 vol.; A. Powell (Ed.) *Brief Lives and Other Selected Writings of John Aubrey*, 1949) made Aubrey famous. Aubrey also had natural history interests and in his *Natural history of Wiltshire*, 1847: 37, unconscious that fungi were involved, percipiently compared fairy rings with ringworm: 'As to the green circles on the downes, vulgarly called faiery circles (dances), I presume they are generated from the breathing out of a fertile subterranean vapour. (The ringworm on a man's flesh is circular. Excogitate a parallolism between the cordial heat, to elucidate the phaenomenon'). *DNB* **1**: 60; A. Powell, *John Aubrey and his Friends*, 1963; D. Tylden-Wright, *John Aubrey: a Life*, 1991.

AUSTEN (Ralph; d. 1676), a gardener, was in 1630 appointed as a University proctor at Oxford where he lived for the rest of his life gardening and raising fruit trees. In *A Treatise on Fruit-trees....Together with the Spiritual Use of an Orchard...*, 1657,

he devoted a few pages to diseases of fruit trees (see Ainsworth (1981): 162. *DNB* 1: 61-2; (BB: 12).

AYLESFORD (Louise Finch, Countess of, (née Thynne) 1760-1832) of Packington Hall, Coventry, Warwicks. 234 watercolour drawings of British lichens, in 2 vol., were sold at Sotheby's 2 June 1971. *D*: 221 (BB: 108) (under Finch, L.)

AYRES (Philip Barnard; 1831-63), MD (Lond., 1841), had an interest in botany (he was a pupil of John Lindley and a friend of **J. T. Quekett** whose histology lectures he edited) and mycology. He was physician at the Islington Dispensary in 1851 and issued a series of exsiccati as *Mycologia Britannici* in 1845. In 1856 he went to Mauritius, as Quarantine Superintendent, where he died. *J. Bot.* 1863: 224; 1865: 191; *Lancet* 1863 1: 707; *D*: 24 (BB: 12).

B

BABBINGTON (Rev. Churchill; 1821-89), scholar and naturalist, was elected Disney professor of archaeology at Cambridge (1865) and in 1866 became rector of Cockfield, Suffolk, where he died. He had a wide interest in natural history (birds and shells in particular) and made contributions on lichens to **J. D. Hooker**, *Flora Tasmaniae*, 1844-60, and **W. M. Hind**, *Flora of Suffolk*, 1889. Some fungi and lichens were also included in his *Primitiae Florae Sarnicae. Outline Flora of the Channel Islands*, 1839. See also **A. Bloxam**.

BACON (Alice Sophia (née Smart) (Mrs Cooke); 1890-1957). Mrs Bacon, as she was known during her thirty years in charge of the Biology Department (which she virtually created) of the Brighton Technical College, was a stimulating and successful teacher who communicated her own enthusiasm for fungi to her students with the result that a number of them, including **P. H. Gregory**, subsequently made their mark as professional mycologists.

Born in London, after attending the City of London School for Girls she graduated in honours botany from East London (now Queen Mary's) College in 1912 when after teaching posts in Swindon and Huddersfield she was appointed to Brighton in 1920. She married twice, in 1916 Gunner S. Bacon, assistant at the Huddersfield public library, who was killed in action in France six weeks later, and, on retirement, Mr H. Cooke, a colleague at the Technical College. *Nature* 180: 411, 1957; *Mycologist* 4: 192, port., 1990; *D*: 146.

BADHAM (Charles David; 1806-57), naturalist, was educated at Eton and Oxford, became a travelling scholar of the university and lived abroad for some years (especially Rome and Paris), qualified for medicine but never practised, and finally entered the church and held curacies in Norfolk and Suffolk.

Badham is famous mycologically for *The Esculent Fungusses of England*, 1847 (royal 8vo, coloured plates by Mrs **Hussey**) (edn 2, 1863; 8vo, edited by **F. Currey**, has inferior plates by **W. Fitch**).

In 1939 the Misses Badham gave to the Haslemere Museum some 500

paintings of British fungi made by Badham's wife. *Badamia* Berkeley (1853). *DNB I*: 72; *SC I*: 89; *D*: 27 (*BB*: 14).

BAGNALL (James Eustace; 1830-1918) of Birmingham, bryologist, contributed lichens and fungi of Staffordshire (1908), Warwickshire (1904), and Worcestershire (1901) to the *Victoria History of the Counties of England*. *D*: 27 (*BB*: 14).

BAIRSTOW (Uriah; 1847-1914), a naturalist of Halifax, Yorkshire, was a founder member of the British Mycological Society. *Naturalist* 1914: 325-6.

BAKER (John Gilbert; 1834-1920), FLS (1866), FRS (1878), a Yorkshire botanist (*b.* Guisborough) who became Keeper of the Herbarium at the Royal Botanic Gardens, Kew (1890-9). While living at Thirsk published *North Yorkshire; Studies of its Botany, Geology, Climate and Physical Geography*, 1863, which includes a section on lichens. He also contributed lichens to the Yorkshire volume of the *Victoria History of the Counties of England*, 1907. *Seaward* (1987): 44; *SC I*: 104; *D*: 30 (*BB*: 15-16).

BAKER (Henry; 1698-1774), FRS (1740), London microscopist, naturalist, and poet. Married Daniel Defoe's youngest daughter Sophia. Author of *The Microscope Made Easy*, 1742 and *Employment of the Microscope*, 1753, which both proved popular. *DNB I*: 78; *D*: 30 (*BB*: 15).

BAKER, Mrs L. E., see L. E. Porter.

BAKER (R.), see E. Wheeler.

BAKER (Richard Eric Defoe; 1908-54), plant pathologist, was educated at Oundle School and Cambridge (Trinity Hall), where he rowed for his College and gained a first class in the Natural Science Tripos. After a year at the Imperial College of Tropical Agriculture, Trinidad, he was in 1933 appointed lecturer in mycology at the College and in 1945 promoted to professor of mycology (from 1947, botany and mycology). He edited the *Flora of Trinidad and Tobago*, 1947, and made expeditions to East Africa (1948) and Colombia (1952). His plant pathological interests included witches' brooms of cacao, and banana and cacao breeding schemes. *Nature* **174**: 1128-9, 1954; *D*: 30.

BALFOUR (Frederick Robert Stephen; 1873-1945), BA (Oxon., 1896), FAS (1924), VMH (1927), JP, company director of Peebleshire, was much interested in forestry and arboriculture and also birds (he introduced several species of pheasants). He served in the army during the First World War and was made Lt-Colonel in 1916. His contribution on botany to J. W. Buchan & H. Paton's *History of Peebleshire* **1**, chap. 10: 1-89, 1925, records more than 100 agarics and boleti (Watling (1986): 10). *Nature* **155**: 357-8, 1945; *WWW (1941-50)*: 52-3; *D*: 32.

BALFOUR (Sir Isaac Bayley; 1853-1922), BS (Edinb., 1873), DSc (1875), MD (1877), FLS (1875), FRS (1884), VMH (1897), knighted (1920), was the second son of **J. H. Balfour**. After being professor of botany at Glasgow (1879) and Oxford (1884) he was professor of botany at the University (which became the main British centre for taxonomic teaching) and keeper of the Royal Botanic Garden, Edinburgh (1888-1921). He edited the *Annals of Botany*, 1887-1912. Balfour's

- main mycological interest was in myxomycetes (due to having been a student of Anton de Bary at Strasburg) and his myxomycete collections are now at the RBG, Edinburgh (**E**). Balfour also revised the English translations, by **H. E. F. Garnsey**, of de Bary's *Comparative Morphology of the Fungi, Mycetozoa, and Bacteria*, 1887, and of *Lectures on Bacteria*, edn 2, 1887. *DNB 2*: 2498; *DSB 1*: 422; *Proc. RS B96*: i-xvii, port., 1924; *Nature 110*: 816-7, 1922; *D*: 32(*BB*: 16).
- BALFOUR** (John Hutton; 1808-84), MA (Edinb.), MD (Edinb., 1832), FRCS (1833), FRSE (1836), FLS (1834), FRS (1865), succeeded **W. Hooker** as professor of botany at Glasgow (1841) and then became Queen's botanist and Keeper of the Royal Botanic Garden, Edinburgh, 1845-79. He founded the Botanic Society of Edinburgh (1836) and the Edinburgh Botanic Club (1838) and was the author of several botanical textbooks. He made many lichen records for (mainly western) Scotland (see Hawksworth & Seaward (1977): 54-5, bibl.). **I. B. Balfour** was his second son. See also **W. R. McNabb**, **T. Sadler**. *DNB 1*: 82; *DSB 1*: 423; *Nature 29*: 355-7, 1884; *SC 1*: 112; *D*: 32 (*BB*: 17).
- BALLS** (William Lawrence; 1882-1960), FRS (1928), CBE (1934), CMG (1944), cotton expert, after schooling in Norwich, graduated from Cambridge (St John's College; of which he was Fellow, 1909-13). He held various botanical posts in Egypt under the Egyptian Ministry of Agriculture (1911-3, 1927-47), was head of the Experimental Department of the Fine Cotton Spinner's Association at Bollington, Cheshire, 1915-26, and designed the Giza Cotton Experiment Station and a system of pure seed supply for Egyptian cotton. The author of books and papers on many aspects of cotton and cotton growing; his interests included its pathology. *Biogr. RS 7*: 1-16, port., bibl., 1961; *Nature 187*: 989-90, 1960; *WWW (1951-60)*: 59; *D*: 34.
- BANBURY** (Geoffrey Howard; d. 1983), mycologist, plant pathologist, graduate from University College, London when it was evacuated to the University College of North Wales during the Second World War. He then studied under T. H. Bennett-Clarke at King's College, London, and after working at Windscale and University College, Ibadan, Nigeria became lecturer in plant physiology at Durham University in 1955 where he took early retirement for reasons of health in 1982. Banbury had a long term interest in fungi (joining the British Mycological Society in 1949). He investigated zygotropism of *Phycomyces* and (with A. P. J. Trinci) tropisms in *Aspergillus giganteus*, and (with A. Peat) other aspects of the physiology of *Aspergillus*. He also had an interest in the physiology of basidiomycetes. *Bull. BMS 18*: 149-50, 1984.
- BANCROFT** (Claude Keith; 1885-1919), plant pathologist, was born in Barbados, graduated from Cambridge (Trinity College) in 1908, and after working at Kew in the Jodrell Laboratory was appointed assistant mycologist to the agricultural botanist, British Guiana. He resigned from the last post because of ill health and died in Toronto. *Nature 103*: 191, 1919; *Kew Bull. 1919*: 86.
- BANKS** (Sir Joseph; 1743-1820), botanist, explorer, president of the Royal Society, 1778-1820. His only contribution to mycology and plant pathology was on black

rust of wheat (*Puccinia graminis*) : *A Short Account of the Cause of the Disease in Corn, Called by Farmers the Blight, the Mildew, and the Rust*, 4to, 2 col. pl (by **F. Bauer**), 1805 re-issued 1806, 1807, and reprinted (8vo) in **W. Curtis**, *Practical Observations on British Grasses*, 1805 and later editions). *DNB 1*: 88; *DSB 1*: 433-7; *H. B. Carter, Sir Joseph Banks, 1987; Sir Joseph Banks bibliography, 1987 (BM (NH), London); SC 1*: 115; *D*: 35 (*BB*: 19).

BARCLAY (Arthur; 1852-91) was born in Edinburgh and after graduating MB in 1874 at Glasgow University (where in 1871 he was awarded a gold medal) joined the Indian Medical Service but later resigned to become professor of physiology at the Medical College Calcutta. At the time of his death (in Simla) he was secretary to the Surgeon-General and Sanitary Commissioner. Like other medical men serving in India, Barclay developed an interest in the local natural history and made notable contributions to the knowledge of the Indian rust fungi (see S. N. Gupta in *History of Botanical Researches in India, Burma and Ceylon*. Part 1. *Mycology and Plant Pathology*, 1958: 8-9, 54-5 (bibl.)). *Proc. LS 1891-2: Lindau & Sydow (1905-17) 1*: 87-8 (bibl.); *D*: 37 (*BB*: 19).

BARGER (George; 1878-1939), FRS (1910), chemist. After posts at the Wellcome Physiological Research Laboratories and the Royal Holloway College (where he was professor of chemistry) among others, Barger became the first professor of chemistry in relation to medicine at Edinburgh University (1919-37). He is particularly noted for his classical monograph, *Ergot and Ergotism*, 1931, based on the Dohme Lectures at Johns Hopkins University, Baltimore, given in 1928. *DNB 2*: 2500; *Obit. RS 8*: 263-85, *port., bibl., 1940*.

BARKER (Bertie Thomas Percival; 1877-1961), mycologist and plant pathologist, was born in Cambridge, attended Perse School, and graduated from the University (Gonville & Caius College). After botanical research under **Marshall Ward** (1899-1904) (he was Walsingham Gold Medallist for Research, 1901) became director of the National Fruit & Cider Institute, Lon Ashton (1904-43) and from 1912 until his retirement also professor of agricultural biology of Bristol University. He was awarded the CBE in 1952. *Bacillus barkeri* Berridge. *Nature 193*: 562, 1962; *AAB 50*: 371, 1962; *WWW (1961-70)*: 57-8.

BARKER (J; 1801-1870) was a member of the Dublin Microscopical Club. In 1867-8 he published on *Chytridium* spp. parasitic on desmids and filamentous algae (see Muskett (1976): 431 (24-6, 30, 34)). See also **W. Archer**, *Porte*, **E. P. Wright**.

BARKER (Thomas; 1838-1907), MA (Aberdeen, 1857), MA (Cantab., 1862), was professor of mathematics at Owen's College, Manchester (1869-85) and bequeathed £40,000 to found the professorship of cryptogamic botany at Manchester University. *DNB 2*: 2502; *D*: 38 (*BB*: 20).

BARNES (Bertie Frank; 1888-1965), PhD (Lond., 1928), FLS (1925), mycologist, graduate from London University and became demonstrator, then lecturer, in botany at Birkbeck College (1922-33) where with **H. C. I. Gwynne-Vaughan** he wrote *The Structure and Development of Fungi*, 1927 (edn 2, 1937). He then became head of the Biology Department at Chelsea Polytechnic (1934-52).

Barnes was editor of the *TBMS*, 1931-49, president of the British Mycological Society (1934), and elected to honorary membership (1950). *Proc. LS 1966*: 119; *WWW (1961-70)*: 59; *D*: 40.

BARRATT (Kate; d. 1977), entered Swanley Horticultural College, Kent, as a student in 1902 and became lecturer there until 1913 when she went to the Imperial College of Science where she was awarded a DSc and married **R. J. Tabor** (q.v.). In 1922 she returned to Swanley College as principal until 1947 when the College was closed and the students transferred to Wye Agricultural College, Kent. *Times* 27 April 1977.

BARRETT (Arthur Max; 1909-61), a morbid anatomist of Cambridge, developed an interest in fungi, joined the British Mycological Society in 1957, and regularly attended forays in the Cambridge district when the specimens he collected were labelled, photographed, and pieces taken for histological examination. His large collection of mycological histological preparations is at the Department of Pathology of Cambridge University. *News Bull. BMS* 18: 11, 1962.

BARROW (John; 1822-90), microscopist, was a founder member of the Leeuwenhoek Microscopical Club, Manchester, of which he was president (1883-4). He published '*Trichophyta tonsurans*' in *Proc. Lit. Phil. Soc. Manchester*, **11**: 29-32, 61-62, 1871-2.

BARTLETT (Albert Williams; 1875-1943), botanist, mycologist, began his career as a science master (Wolsingham Grammar School, 1895; Henley-on-Thames Grammar School, 1898-1901), graduated from the Royal College of Science with first class honours (1898) and subsequently gained a first class in the Natural Science Tripos, Part II at Cambridge (Christ's College) in 1903. From 1903-8 he was Superintendent of the Botanic Garden and Government Botanist, British Guiana, when he initiated the *Journal of the Board of Agriculture of British Guiana* and made numerous reports on diseases of economic plants. After a year's research at Cambridge, Bartlett became assistant lecturer in botany at Sheffield University, 1909-20 (including 4 years of army service) and finally held a similar lecturer's post at Armstrong College, Newcastle-on-Tyne where his principal interest was mycology. He was president of the Northern Naturalists' Union (1928) and among other papers published on *Urophlyctis* and *Olpidium* in the *TBMS* (**11,13**). *Proc. LS 1942-3*: 293-4; *D*: 43.

BARTON-WRIGHT (Eustace Cecil; 1902-75), BSc (Lond., 1925), DSc (Lond., 1944), FRIC, FIBiol. (1964), microbiologist, was the son of a rubber planter in South India. Educated in England he attended Birkbeck College and Chelsea Polytechnic and graduated in botany with first class honours. After a period of research he was a virus worker to the Scottish Society for Research in Plant Breeding, Corstophine (1926-74) and then worked at the British Flour Millers' Research Association (later the Cereal Research Station), St. Albans. Subsequently he set up as a microbiological consultant with **L. D. Galloway** in London until 1972. On the death of his wife, Kathleen, Barton-Wright in 1973 sponsored an Institute of Biology lecturship to her memory.

- BATES** (G. R.; d. 1974), worked at the Shirley Institute, Manchester, in the nineteen-twenties (see **L. E. Morris**).
- BATKO** (S.; d. 1977), forest pathologist, was born in Poland and gained a D. Ing. For. in forestry from Lwów University. In 1941 Batko came to England as a refugee, by one of the last sailings from a French port before the fall of France, after a devious route from Poland which involved crossing many frontiers. During the war he worked at the Herbarium of the Royal Botanic Gardens, Kew, and subsequently at the Alice Holt Station of the Forestry Commission. *Picture Post* **29** (5): 21, port. (top left), 1945.
- BATTS** (Cecil Charles Vincent; 1922-68), plant pathologist, graduated in agricultural botany from Reading in 1945. He was appointed assistant agricultural botanist at the Edinburgh and East of Scotland Agricultural College where he became (in 1948) plant pathologist, leaving in 1958 to start a new department, at the National Institute of Agricultural Botany, Cambridge, to assess disease resistance in variety trials. Finally, in 1956, he was appointed to the Botany Department of the Imperial College of Science to start a 1-year postgraduate plant pathology course. He published on the rusts and smuts of cereals (*TBMS* **34-5**, **38**, **43**). *Ann. Appl. Biol.* **49**: 385-6, 1961; *News Bull. BMS* **16**: 6, 1961.
- BAUER** (Franz (Francis) Andreas; 1758-1840), FLS (1804), FRS (1821), botanical artist (at the Royal Botanic Gardens, Kew, 1790-1840), was born at Feldberg, Austria, and died at Kew. He contributed 2 coloured plates to Sir **Joseph Bank**'s account of wheat rust (*Puccinia graminis*) and there is a series of his beautiful drawings (together with a manuscript) of *Diseases of Corn* (including wheat bunt and loose smut, black rust, etc., and ergot of rye) at the Natural History Museum, London. *DSB I*: 520-1; *W. Blunt, Botanical illustration, 1967*: 195-202; *SC I*: 146; *D*: 47-8 (*BB*: 25).
- BAWDEN** (Sir Fredrick Charles; 1908-72), plant pathologist and administrator, was born in Devon and graduated from Cambridge (Emmanuel College) where he made post-graduate studies in plant pathology under **F. T. Brooks**. Appointed assistant to **R. N. Salman** at the Virus Research Station, School of Agriculture, Cambridge (1930-36), virology became his principal research interest throughout his career and he is particularly remembered for the part he played (with the biochemist N. W. Pirie) in elucidating the nature of tobacco mosaic virus and as the author of *Plant Viruses and Virus Diseases*, 1939 (edn 4, 1964) which became a standard text. Although an 'academic' virologist Bawden never forgot that the right end of plant pathology is the prevention and control of disease in plants and his book, *Plant Diseases*, 1948 (revised, 1950), proved popular. Bawden became successively virus physiologist at the Plant Pathology Department Rothamsted Experimental Station (1935-40), head of the Department (1940), deputy director (1950-58), then director of the Station (1958-65). He was elected FRS in 1949, knighted, 1967, and received many other honours. He was a forthright speaker and enlivened many a meeting, travelling widely, and made notable contributions to agricultural and plant pathological policy in both the U.K. and Commonwealth.

DNB (1971-80): 41-2; Biogr. RS 19: 19-63. port., bibl., 1973.

- BAXTER** (William; 1787-1871), head gardener of the Botanic Garden, Oxford, issued *Stirpes Cryptogamas Oxfordiensis or Dried Specimens of Cryptogamous Plants Collected on the Vicinity of Oxford*, 1825, 1828 (2 fasc., 100 items) which included lichens and fungi. *DNB 1: 114; SC 1: 151; D: 48 (BB: 25).*
- BAYLISS-ELLIOTT** (Jessie Sproat (née Bayliss); 1869-1927), BSc (Lond., 1891; BSc Birmingham., 1906), DSc (1908), who married **W. T. Elliott**, was lecturer in botany at Birmingham University, 1908-30, from where she published on various mycological topics including fairy rings (*J. Econ. Biol.* **6**: 111-32, 1911). *D: 49.*
- BEAUMONT** (Albert; 1901-87), plant pathologist, graduated from Cambridge (Emmanuel College), 1921-2. He was advisory mycologist at Seale-Hayne Agricultural College, Devon, 1923-46, then advisory plant pathologist to the NAAS, Leeds (Lancs. & Yorks.), 1940-61, and retired to Falmouth, Cornwall. His simplified 'Temperature-humidity rule' (*TBMS* **31**: 45-53, 1947) for forecasting outbreaks of potato blight in the South-West proved to be of very general application in England. Published 'List of diseases of Devon and Cornwall' (*Pamph. Seale-Hayne Agric. Coll.* **46-49**, 1934-39).
- BECK** (Sarah Coker (née Adams); 1821-1915) *d.* Risborough, Bucks., was sister of the Rev. D. C. O. Adams (1822-1914) who specialized on *Rubus*. She contributed records of fungi to **G. C. Druce's** *Flora of Oxfordshire*, 1886. *D: 51.*
- BEER** (Rudolph; 1873-1940), botanist and plant pathologist, was born at Bickley, Kent, and after graduating from University College, London, in 1903 studied medicine at St. Thomas's Hospital where he was influenced by T. G. Hill. He published on botanical topics alone and with others (including, in 1915, **Agnes Arber**) and was an expert gardener and won prizes at Royal Horticultural Society shows. During the 1914-18 war he joined the newly formed plant pathology laboratory of the Board of Agriculture at the Royal Botanic Gardens, Kew, where under J. C. F. Fryer and **A. D. Cotton** he worked on diverse plant diseases and in 1920 monographed the smut genus *Melanotaenium* (*TBMS* **6**: 331-43). He suffered life-long ill health. *Proc. LS 153: 288-9, 1942; D: 53.*
- BELL** (Elizabeth; *d.* 1876) of Coldstream, Berwick. *Agaricus belliae* Johnston ex Berk., 1841 (*Mycena belliae*), found at the base of reed (*Phragmites*) stems, and first collected by Lord Home, was named in her honour by **G. Johnston**.
- BELLERBY** (William; 1852-1936), amateur bryologist and mycologist of York, was a timber merchant. *D: 55.*
- BENNETT** (Alfred William; 1833-1902), BA (London., 1853), BSc (1868), FLS (1869), from 1858-68 a London bookseller and publisher, was lecturer in botany at St. Thomas's Hospital and at Bedford College for Women. He wrote (with **G. R. M. Murray**) *Handbook of Cryptogamic Botany*, 1889 (London). *DNB 2: 2511-2; SC 1: 171; D: 56 (BB: 28).*
- BENNETT** (F. T.; b. 1884), BSc Agric, NDA, PhD (Lond., 1928). He was assistant lecturer in agricultural botany, Leeds University, 1921-4; then advisory mycologist (plant pathologist), Armstrong College, Newcastle-on-Tyne, 1925-46,

and finally advisory plant pathologist at the NAAS Subcentre, Devon, 1946-8. He retired to Teignmouth.

BENNETT (John Hughes; 1812-75) was an Edinburgh physician. He is noted mycologically for being the first in the British Isles to repeat and confirm some of David Gruby's classical investigations on ringworm and for a paper (*Trans. Roy. Soc. Edinb.* **15**: 277-94, 1841) on fungi in a number of living animals. *DNB* **1**: 136; *BMJ* 1875 **2**: 473-78b; *Lancet* 1875 **2**: 533-4.

BENNETT (Margery; 1918-80), plant pathologist on the staff of the Plant Pathology Department of East Malling Research Station, 1943-78, was for many years in charge of recording field trials for the three Departments of the Crop Protection Division. She was well known for her studies of apple canker, silver leaf of plum, and *Botrytis* on strawberries. *FBPP Newsletter* **5**: 50, 1980.

BERKELEY (Cecillia E.; fl. 1850s). Rendered services to 'mycology by many excellent illustrations and in other ways', *Agaricus (Amanita) cecilliae* B. & Br., 1854. **M. J. Berkeley**, *Ann. Mag. Nat. Hist.* **13**: 396-7, 1854, *vide D*: 60.

BERKELEY (Rev. Miles Joseph; 1803-89), MA (Cantab.), FRS (1879), FLS (1836), is generally accepted to be the founding father of British mycology. He and his slightly younger compatriot **M. C. Cooke** dominated British mycology during the nineteenth century and the names of both are still in international currency. Berkeley's life was both conventional and uneventful and can be quickly summarised. Born 1 April 1803 at Biggin Hall, Northamptonshire, he was educated at Oundle and Rugby and graduated from Christ's College, Cambridge, in 1825. The next year he was ordained an Anglican priest and took a curacy at Margate becoming, in 1833, Perpetual Curate of Apelthorpe and Woodnewton, Northamptonshire, (when he lived in the neighbouring village of King's Cliffe), and finally (1868) Vicar of Sibertoft near Market Harborough where he died 30 July 1889. Interested in natural history as a boy, Berkeley was, like **Charles Darwin**, while at Cambridge influenced by Rev. Prof. **J. S. Henslow**, geologist and professor of botany. His first publications were on zoological topics but the opportunity to study marine algae at Margate and contacts with W. H. Harvey of Dublin and **Robert K. Greville** of Edinburgh resulted in his *Gleanings of British Algae*, 1833, and the decision to specialize on cryptogams, especially fungi. Correspondence with **William J. Hooker**, then professor of botany at Glasgow, led Hooker to ask Berkeley to prepare the section on agarics for the mycological volume of *The English Flora* by **J. E. Smith**. Berkeley's contribution was so satisfactory that Hooker induced him to cover the whole group and a 433-page volume, *Fungi*, appeared in 1836 (*The English Flora* **5** = Hooker's *British Flora* **2** (2)). This work, supplemented by four fascicles of exsiccati comprising a total of 350 specimens distributed by Berkeley during 1836-43, was the most comprehensive national census of fungi hitherto produced and included much original observation.

Berkeley continued to make contributions to the British fungus biota for the next fifty years, especially by a series of 2050 'Notices of British Fungi', most

Figure 2. Rev. Miles Joseph Berkeley (1803-1889)

in collaboration with **C. E. Broome** of Bath, which appeared in 35 instalments between 1837 and 1885 (index, *TBMS* **17**: 308-30. 1936). Berkeley also published on exotic fungi including those collected by **Charles Darwin** on the voyage of the Beagle (e.g. *Cyttaria darwinii* Berk.) and a long series on North American fungi in collaboration with M. A. Curtis (see R. H. Petersen, *Bibliotheca Mycologia* **72**, 1980; Cramer). After **W. J. Hooker** became director of the Royal Botanic Gardens, Kew, in 1841, fungi received at Kew for identification, including those

made by **J. D. Hooker** in the Himalayas (1847-50), were passed on to Berkeley who published many of his determinations in 'Decades of Fungi', 1-62, 1844-56 (Asher reprint, 1969). Berkeley was most industrious. He was the author or joint author of more than 600 publications, described some 600 new species, and amassed a herbarium of 10,000 specimens which in 1879 he gave to Kew.

But Berkeley was more than an able taxonomist. He independently elucidated the structure of the basidium (1838), recognized that potato blight was of fungal origin (1846), wrote a 600 page book, *Introduction to Cryptogamic Botany*, 1857, which became a standard text, and published a notable series of articles on 'Vegetable Pathology' in the *Gardeners' Chronicle* during 1854-1857.

To meet the financial pressures of a large family (there were 15 children, 13 of whom survived to adolescence) he and his wife for a time ran a school for boys at King's Cliffe and Berkeley earned extra money where he could. He was a regular contributor to the *Gardeners' Chronicle*, edited the Royal Horticultural Society's Journal, 1866-77, acted as examiner for London University and other bodies, and contributed to such publications as *The Vegetable Kingdom*, 1846 (edn 3, 1853) by Lindley, Lindley & Moore's *Treasury of Botany*, 1866 (-1899) and the second edition of *A Cyclopaedia of Agriculture* by J. C. Morton. He was granted a Civil List Pension of £100 in 1867 for services to botany and diseases of plants in particular and remained active to the end though troubled by gout. See also **C. E. Barkeley, A. Bloxam, C. Bryant, D. Carmichael, H. V. Carter, A. Clarke, W. Gardiner, A. Jerdon, D. Stock, G. H. K. Thwaites**. *DNB* 2: 2374; *DSB* 2: 18-19; *Ann. Bot.* 3: 451-6, bibl., 1890; *Phytopath. Classics* 8: 5-12, port., 1948; *SC* 1: 192; *D*: 60 (*BB*: 31).

BERRIDGE (Emily Mary; 1872-1947) was born at Bromley, Kent, and, after studies at Bedford College, London (1891) and Holloway College, in 1898 gained the External London BSc with honours in physics. After teaching in York for two years she returned to botany as a research student in London at University College (1900) and Imperial College (1910). At the Imperial College she worked with Professor **S. G. Paine** on the physiology and parasitology of plant pathogenic bacteria (see *AAB*, 1921-30) and was awarded a DSc in 1914. Glaucoma, and the loss of an eye in 1938 put an end to microscopy. A member of the Royal Horticultural Society for many years, she was 'a true gentlewoman, one of the early band of men and women of leisure who devoted their lives to science, not for personal reward...'. *Nature* 161: 87, 1948; *Proc. LS* 1947-48: 68-70; *D*: 61.

BEWLEY (William Fleming; 1891-1976). On graduating from Armstrong College, University of Durham, Bewley was appointed in 1914, assistant bacteriologist at Rothamsted Experimental Station. Seconded for service in the Royal Field Artillery during the 1914-18 war he returned to Rothamsted in 1919 a few months before being appointed mycologist at the Experimental & Research Station Cheshunt (situated in the Lea Valley, Herts) of which he became director in 1921 and remained so until the Station closed 34 years later. In 1953 the Cheshunt Research Station became the Glasshouse Crops Research Institute and in 1955 its

staff moved to a new site near Littlehampton, Sussex, where the Cheshunt work was amalgamated with that of the Mushroom Research Association's from Yaxley under Bewley's directorship until his retirement in 1956.

Bewley's early and varied work at Cheshunt (that, begun at Rothamsted, on the control of soil-borne diseases by steam sterilization being notable) resulted in *Diseases of Glasshouse Crops*, 1923, which became a standard text. Later Bewley wrote *The Cultivation of Mushrooms*, 1938 (edn 3, 1963) (with J. Harnett), *Commercial Glasshouse Crops*, 1950 (a comprehensive text written before the outbreak of the Second World War), and finally, as a result of his BBC gardening programmes with Roy Hay (1910-89), *Science Has Green Fingers*, 1959.

Bewley was popular with growers, much in demand as an adviser and

Figure 3. W. F. Bewley (1891-1976)

lecturer on many aspects of horticulture. He was appointed CBE (1934) and in 1938 awarded the Victoria Medal of Honour in Horticulture by the Royal Horticultural Society. See also **W. Buddin, L. E. Morris, S. G. Paine**. *Ann. Rep. Glasshouse Crops Res. Inst. 1976: 12-13, port., 1977.*

BIDGOOD (John; 1853-1905), FLS (1889), headmaster of Gateshead-on-Tyne Secondary School, was an enthusiastic botanist and geologist. Orchids were a special interest. **M. C. Cooke** named *Gloeosporium bidgoodii* in his honour. *Proc. LS 1905-6: 32; D: 63 (BB: 32).*

BIFFEN (Roland Harry; 1874-1949), mycologist and plant breeder, was born at Cheltenham, graduated at Cambridge (Emmanuel College) in 1898 with honours, and was appointed to the Frank Smart Studentship when he took up mycological research. In 1898 he became a university demonstrator under **H. M. Ward** and made fungus forays with **C. B. Plowright**. During 1898-1902 Biffen published a number of mycological papers. He was a Foundation member of the British Mycological Society and twice president (1905, 1930).

In 1899 Biffen was appointed lecturer in botany in the Cambridge Department of Agriculture and turned his attention to plant breeding. He is famous for having demonstrated that susceptibility and resistance of wheat varieties to yellow rust are transmitted in Mendelian fashion (*J. agric. Sci.* **2**: 109, 1907; **4**: 421, 1912). He also introduced the wheat varieties Little Joss and Yeoman.

In 1908 he was appointed the first professor of agricultural botany at Cambridge (a post he held until 1931) and in 1911 became the first director of the Plant Breeding Institute (which was attached to the School of Agriculture) and had much to do with the establishment of the National Institute of Agricultural Botany in 1919. A skilled engineer, a competent watercolourist, Biffen was a keen gardener and wrote a book on the garden *Auricula*. He was elected FRS (1914), awarded the Darwin Medal of the Royal Society (1920), and knighted 1925. *DNB 2: 2517; Obit. RS 19: 9-24, port., bibl., 1950; TBMS 33: 166-8, port., 1950; D: 63.*

BIRKBECK (George; 1776-1841), MD (Edinb.1799), the son of a banker, was born at Settle, Yorks. At 23 he became professor of natural philosophy at Anderson University (now a College of Glasgow University) and the lectures he initiated for working men became, in 1833, the Glasgow Mechanics Institute. In 1804 he moved to London where he practised as a physician and was instrumental in starting Birkbeck College (now part of London University). He himself frequently lectured and published *A Lecture on the Preservation of Timber by Kyan's Patent for Preventing Dry Rot*, 1835 (London). *DNB 1: 161.*

BISBY (Guy Richard; 1889-1958) changed his nationality twice. Born on a farm at Brookings, South Dakota, he graduated from the South Dakota State College, Brookings, 1912 (while earning money in the evenings as a 'bell hop' at a local hotel) becoming MA of Columbia University, 1917, and gaining a PhD at Minnesota where E. C. Stakman (1885-1979) was a fellow student. He spent

1916-20 on the staff at Minnesota and 1920-36 as professor of plant pathology at the University of Manitoba, Winnipeg (where he became a Canadian) and finally (1936-54) worked as senior assistant mycologist at the Commonwealth Mycological Institute, Kew; adopting British nationality.

The author of more than a hundred books and papers on plant pathology and mycology, Bisby is best remembered as a taxonomist. His strength in this field was an ability to make working decisions quickly and this, combined with a systematic approach and prodigious industry, gave him the knack of bringing to a conclusion any project on which he might be engaged. In a notable series of collaborations he set the pace and brought to fruition catalogues of fungi of Manitoba (with **A. H. R. Buller** & J. Dearness, 1852-1954), India (**E. J. Butler**), Ceylon (Sri Lanka) (**T. Petch**), lists of British pyrenomycetes (**E. W. Mason**), hyphomycetes (**Elsie M. Wakefield**), and rusts (**M. Wilson**), and a *Dictionary of the Fungi* (G. C. Ainsworth). His mycological interests were wide - rusts, because of an early association with J. C. Arthur (1850-1942), being of particular interest. Bisby's ready help in identifying specimens and prompt replies to inquiries was

Figure 4. Guy Richard Bisby (1889-1958)

much appreciated. His *An Introduction to the Taxonomy and Nomenclature of Fungi*, 1945 (edn 2, 1953) was a useful little book.

Although of a retiring disposition Bisby had wide interests including chess, archaeology, the clarinet, gardening, and, like many taxonomists, stamp collecting. One of his chief hobbies was correspondence with a wide circle of international friends who welcomed the sight of his clear handwriting and the signature written with such dash and flourish.

When leaving home on the first day of his semi-retirement on half-time, he had a stroke which resulted in his death some four years later. In 1988 Bisby's collections of Canadian fungi were moved from Manitoba to Ottawa (**DAOM**). *TBMS* **42**: 129-31, port., 1959; *Nature* **182**: 987, 1959; *Taxon* **8**: 2, 1959; *Phytopathology* **49**: 323, port., 1959; *SC* **1**: 219; *D*: 66.

BLACKLEY (Charles Harrison; 1820-1900) was a Manchester physician noted for his monograph *Experimental Researches on the Causes and Nature of Catarrhus aestivus (Hay-fever or Hay-asthma)*, 1873 (London) (Facsimile reprint, 1959) which includes the first experimental proof that fungal spores are allergenic. *BMJ* **1929** **2**: 1171-2; *Manchester Evening News* 5 Sept. 1900.

BLACKMAN (Vernon Herbert; 1872-1967) was a younger brother of F. F. Blackman the Cambridge plant physiologist. Like his brother V. H. Blackman went to Cambridge (St Johns College) where he graduated with First Class Honours in 1895. For the next 10 years he was on the staff of the British Museum (Natural History) studying the cytology of fungi (especially rusts) and lecturing at Birkbeck College and the East London College (hence his collaboration with Helen Fraser (**H. C. I. Gwynne-Vaughan**)). In 1906 he went to Leeds as professor of botany where he developed his plant physiological interests and revised **H. M. Ward**'s account of fungi for the *Encyclopaedia Britannica* edn 11, 1910-11. Blackman returned to London in 1911 to the newly created chair of plant physiology at the Royal (later Imperial) College of Science under Professor J. Farmer whom he succeeded as professor of botany in 1924.

At the Royal College Blackman lectured on both plant physiology and plant pathology, the latter being supplemented by lectures on two days of the week for a term or so by **E. S. Salmon** of Wye College. After the 1914-18 war Blackman's sole interest was in plant physiology and on being succeeded by **W. Brown** (who had joined the College to work under Blackman in 1912) as professor of botany in 1937 served as Head of the Institute of Plant Physiology based at the Imperial College. He also, as a development of studies at Imperial College on fruit ripening, with F. F. Blackman (his brother), played an active part in establishing the Low Temperature Research Station at Cambridge.

Blackman was elected FRS in 1913 and his eldest son, Geoffrey, became professor of Rural Economy at Oxford University. Cf. **G. H. JONES**. *DNB* (1961-70): 113-4; *Biogr. RS* **14**: 37-60, port., bibl., 1968, *TBMS* **51**: 351-2, 1968; *Ann. Bot., Lond.* **32**: 233-5, port., 1968; *D*: 67.

BLACKWELL (Elizabeth Marianne; 1889-1973) was born in Southport and achieved a

first class honours degree in botany in 1911 at Liverpool University where the next year she gained an MSc. While holding junior posts at Liverpool she was granted periods of leave to study aspects of mycology at the Huxley Laboratory of the Imperial College of Science in London and in 1920 was appointed head of the botany department of the Royal Holloway College where she remained until her retirement in 1949. Introduced to *Phytophthora cactorum* at the Imperial College, Miss Blackwell specialized in the genus *Phytophthora* throughout her working life, investigations that have been continued and amplified by her student and former collaborator Grace M. Waterhouse. Miss Blackwell was a good all round botanist, a keen field worker. She regularly attended forays of the British Mycological Society of which she became president (1942). On retirement, to live with a sister near Huddersfield, she became an active member of the Yorkshire Naturalists' Union and served as chairman of the YNU Mycological Committee in 1955. She also contributed several useful historical articles on Yorkshire mycology and mycologists to the *Naturalist* (see References). Her diverse interests included playing the cello, gardening, and writing contributions to *The Countryman* magazine. See also **M. Madge**. *TBMS 61: 611-4, port., bibl., 1973; D: 68.*

BLAXALL (Frank Richardson; 1866-1930), MD (Lond., 1880), was bacteriologist to Westminster Hospital, London (1893) and subsequently director of the Government Lymph Department, Hendon, for 23 years from 1907. He collaborated with **T. C. Fox** on one of the classical English studies of human ringworm (see *Brit. J. Derm.* **8**: 241-55, 291-308, 337-59, 377-84, 1896). *BMJ 1930 I: 1029; Lancet 1930 I: 1211-2; Nature 125: 944, 1930.*

BLOOMFIELD (Rev. Edwin Newson; 1827-1914) was born at Great Glenham, Suffolk, graduated from Cambridge (1850), and became rector of Guestling, Sussex (1862). He contributed lists of Suffolk fungi to the *Trans. Norf. Norwich Nats Soc.* (**8**: 246-64, 1909) and the *Victoria History of the Counties of England* (Suffolk **1**, 1911). He also published on the fungi and lichens of Sussex (see Ainsworth & Waterhouse (1989): 24). *D: 71 (BB: 36).*

BLOXAM (Rev. Andrew; 1801-78), general naturalist, was perpetual curate of Twycross, Leics. (1839-71), then rector of Harborough Magna, Warcs., where he died. After graduating from Oxford (Worcester College), and before taking Holy Orders, he was for eighteen months naturalist on the frigate *Blonde*, which took the bodies of the King and Queen of the Sandwich Islands (who had died in this country) back to their native land, when he made extensive natural history collections which were deposited at the British Museum. Bloxam was interested in ornithology, conchology, plants (especially Rubi and Rosae), and also in microfungi and lichens. He corresponded with **M. J. Berkeley**, **C. E. Broome**, and others but published relatively little on mycological and lichenological topics (with **C. Babington** he contributed a list of lichens to T. R.P. Otter, *The History and Antiquities of Charnwood Forest*, 1842: 59-62). There is a detailed manuscript on Leicestershire cryptogams attributed to Bloxam at the British

Museum (Natural History). *Bloxamia truncata* B & Br. (1854). *DNB 1*: 176; *Hawksworth & Seaward (1977)*: 20; *D*: 71 (*BB*: 36).

BOHLER (John; 1797-1872), lichenologist of South Wingfield, Derbys., was a stocking weaver and collector of medical plants for physicians. He issued a series of exsiccati, *Lichenes Britannici*, 1835-7 (consisting of 128 specimens (or drawings) by **R. Deakin**), contributed a plant list, including lichens, to J. H. Aveling, *History of Roche Abbey from its Founding to its Dissolution*, 1870, and is thought to have contributed the lichens to **G. Howitt**, *Flora of Nottinghamshire*, 1839. *Hawksworth & Seaward (1977)*: 12, 203; *Seaward (1987)*: 41; *SC 1*: 253; *D*: 73 (*BB*: 37).

BOLTON (James; fl. 1750s-1799) was a self-taught amateur naturalist (probably in the weaving trade) who lived in the neighbourhood of Halifax, Yorks., throughout his life. He wrote and illustrated important books on ferns (*Filices Britannicae*, 1785; *A History of British Proper Ferns....*, 1795) and British song birds (*Harmonia Ruralis*, 2 vol., 1794-6), and made many watercolour drawings of British plants, most of which are unpublished. Bolton is particularly famous for his interest in fungi (he contributed the botany to J. Watson, *History of the Parish of Halifax*, 1775, where he listed 83 lichens and 56 fungi) and especially for his *An History of the Fungusses Growing About Halifax*, 4 vol., quarto, 1788-91, (dedicated to **Henry Noel**, 6th Earl of Gainsborough) which is the first British book devoted to fungi. This last was issued with plain or hand-coloured plates and a German translation, *Geschichte der Merkwürdigsten Pilze*, 4 vol., octavo, with inferior plates, was published in 1795-1820. The original manuscript was bought by C. L. Shear and is now in the USDA Library at Washington, DC (see *TBMS 17*: 302-7, 1933). For an index, see R. Peterson, *Mycotaxon 5*: 498, 1977. See also **T. Flintoff**, **E. Robinson**. *DNB 1*: 181; *C. Crossland*, 'An Eighteenth Century Naturalist - James Bolton, Halifax' (reprinted with slight alteration, from the *Halifax Guardian*) 732 pp., 1910; *R. Watling & M. R. D. Seaward*, *Arch. Nat. Hist. 10*: 89-110, 1981; *Mycologist 4*: 143, port., 1990; *SC 1*: 264; *D*: 74 (*BB*: 37).

BOND (Thomas Edward Tucker; 1913-87), plant pathologist, was born in Wimbledon, graduated in agricultural botany from Reading in 1933 and then held a Ministry of Agriculture post-graduate scholarship at Cambridge (Emanuel College) where he was awarded a PhD (1937). Next he became assistant lecturer in botany at Aberdeen University (1937-40), plant pathologist at the Tea Research Institute, Ceylon (Sri Lanka) until 1946, then, on his return to England, lecturer in botany at Sheffield University until 1949 when he became senior lecturer and head of the Horticultural Science Laboratory at Bristol. In 1962 he was seconded as tutor to post-graduate students at the Long Ashton Research Station where he remained until his retirement in 1978.

In Ceylon, Bond investigated virus diseases of the tea bush (work which gained him DSc Reading) and he wrote a book on the flowers of Ceylon. His mycological interests were wide and he became an expert agaricologist,

organizing annual fungus forays for Bristol students to Westonbirt Arboretum and other sites. All his publications from his study of *Ustilago hypodytes* on *Elymus arenaria* on the Aberdeen sand dunes (1940) to the survey of the agaric flora of his own garden (*Bull. BMS* **15**: 99-138, 1981) were scholarly. See also **E. M. Day**. *Univ. Bristol Newsletter* **18** (4): 2, 1988.

BORRER (William; 1781-1862), FLS (1835), botanist and lichenologist, of Henfield, Sussex, contributed to **W. J. Hooker** (Ed.), *Supplement to English Botany*, 1831-49, and supplied the lichens of Sussex to T. H. Cooper, *Botany of the County of Sussex*, 1834. *Borrera* Acharius (1809). See also **T. Salwey**, **D. Turner**. *DNB* **1**: 188; *Hawksworth & Seaward* (1977): 10-13, port.; *D*: 776 (*BB*: 39).

BOSSEY (Francis; 1809-1904), MD (Glasgow), practised at Woolwich until 1867. Published 'Fungi which attack cereals' *Proc. Bot. Soc. Lond.* 1839: 50). *J. Bot.* 1904: 358; *D*: 77 (*BB*: 39).

BOYD (Andrew Edward Wilson; 1916-81) attended Paisley Grammar School, graduated from Glasgow University in 1938, and was awarded a PhD (Glasgow) in 1942 while working at the West of Scotland College of Agriculture on potato eelworm and blind seed disease of ryegrass. He was then stationed at Sutton Bonnington to work (under the direction of **G. Samuel** of the Ministry's Plant Pathology Laboratory, Harpenden) on the wastage in potato clamps and his main work was on potato problems for the rest of his career - first as special assistant to **C. E. Foister** at the Edinburgh Plant Pathology Laboratory and then (from 1950) at the East of Scotland College of Agriculture where he became head of the Crop Protection Department (1950-81) and where for the eighteen years preceding his sudden death his potato investigations were supported by the Potato Marketing Board. During his early years at the East of Scotland College Boyd produced the classical account of beet 'strangles' (*ESAC Tech. Bull.* **26**, 1966). Boyd was awarded a DSc (Glasgow) in 1966 and elected Fellow of the Royal Society of Edinburgh in 1970 and among other offices served as chairman of the Pathology Section of the European Association of Potato Research. *Roy. Soc. Edinb. Year Book* 1982: 24-6.

BOYD (Daniel Alexander; 1858-1928) was born at West Kilbride, Ayrshire, and lived there until 1912 when he moved to Saltcoats where he died. Boyd qualified as a Writer to the Signet but never practised and devoted himself to archaeology and natural history, particularly fungi - first basidiomycetes, then microfungi which he collected, both extensively and intensively in the area, and on which he published many articles, thereby adding many species to the British list see Ainsworth & Waterhouse (1989): 30-1). He served a term as president of the Scottish Cryptogamic Society. *J. Bot.* 1929: 52-3; *Ramsbottom* (1963): 176; *D*: 82.

BRACHER (Rose; 1894-1941), botanist, was born and educated at Salisbury and graduated with first class honours from Bristol University in 1917. After posts in London and a visit to Wisconsin she became assistant lecturer in botany at Bristol (1921) and later lecturer (1929); then senior lecturer (1940). Her main investigations were on the ecology of tidal mud banks but she published a short

paper on *Rhytisma* on sycamore (*TBMS* 9: 183-6, 1924). *Nature* 148: 134, 1941; *D*: 83.

BRADBURY (Frank; d. 1981), was born in Northamptonshire and graduated in pharmacy and chemistry from University College Nottingham. During the Second World War he ran the army's chemical warfare laboratory in India and then was from 1947-65 a member of the research staff of Imperial Chemical Industries Ltd., Merseyside, where he worked on crop protection problems and developed the manufacture of the herbicide paraquat. Bradbury then took up teaching, becoming professor of industrial science at Stirling University where he maintained an interest in agricultural and ecological problems. He was a founder member of the Science and Social Science Research Councils and was awarded the CBE (1979). *Times* 10 Sept. 1981.

BRADLEY (Richard; 1688-1732), FRS (1712), botanist and horticulturist was appointed professor of botany at Cambridge University in 1724 and if this appointment was not a success (Bradley's ignorance of Latin and Greek 'was a scandal') Bradley had a lively mind and published on a variety of topics. He was interested in disease in plants (which he attributed to insects) and in 1718 he was advocating in *New Improvements of Planting and Gardening, both Philosophical and Practical* e.g. the introduction of mercury into holes bored into the wood of fruit trees as a therapy. *DNB* 1: 206; *H. H. Thomas, Address to the British Agricultural History Society*, 3 Dec. 1955; *SC* 1: 300; *D*: 84 (*BB*: 42).

BRENAN (Rev. Samuel Arthur; 1837-1905), BA (Dublin), who died at Cushendun, Co. Antrim, was the first to record gooseberry mildew (*Sphaerotheca mors-uvae*) for Europe (Counties Antrim and Down) in 1900 (see Muskett (1976): 435 (253, 256), 419-20). *D*: 87 (*BB*: 44).

BRENCHLEY (George Henry; 1930-84), plant pathologist, was born at Dulwich, attended Whitgift School, and graduated from Cambridge (Clare College) in 1925. After working on silver leaf of fruit trees as assistant to **F. T. Brooks** he was appointed plant pathologist to the Horticulture Research Station in the School of Agriculture at Cambridge where he investigated club root of brassicas. Associated with camouflaging of airfields during the 1939-45 war, he joined the Ministry of Agriculture's Advisory Service in 1944 and was stationed at the Harper Adams College where he again studied clubroot, under the supervision of **N. C. Preston**. When the National Agricultural Advisory Service was established he moved to the Star Cross, Devon, subcentre and finally, in 1954, on the death of **W. A. R. Dillon-Weston**, returned to Cambridge as head of the Eastern Region of NAAS. He retired from the NAAS in 1966 to work for the Ministry of Agriculture's Aerial Photographic Unit which he had initiated when studying the use of aerial photographs to chart the progress of epidemics of potato blight and the effects of aerial spraying. *Bull. BMS* 18 150, 1984

BRETT (Margaret Annie; 1889-1977), MSc., PhD (1932), FLS, mycologist, was for many years lecturer in botany at the North London Polytechnic and after her retirement (*ca* 1950) lived at Bridport, Dorset. She regularly attended BMS

forays, left a legacy (of £100) to the Society's Benevolent Fund, and was from *ca* 1950 to 1977 a governor, and later secretary, of the Botanical Research Fund. Dr Brett's main mycological interests were *Stemphylium*, *Cladosporium*, and a fungal infection of *Ulex minor* (*TBMS* **16**, **24**, **30**). *Bull. BMS* **12**: 75, 1978.

BREWER (Samuel; 1670-1743), botanist, was born at Trowbridge, Wilts., where he was engaged in woollen manufacture. After failure of his business, in 1727 he moved to Yorkshire where he was befriended by **R. Richardson** and became gardener to the Duke of Beaufort at Badmington, and died at Bierley. Brewer collected with **Dillenius** and supplied lichen and other records to the latter for edn 3 of **Ray's Synopsis**, 1724. *DNB* **1**: 206; *J. Bot.* 1898: 12; *D*: 87 (*BB*: 44).

BRIAN (Percy Wragg; 1910-79) graduated with first class honours from King's College, Cambridge in 1931 when he was awarded the Frank Smart Studentship in Botany. After a post at Long Ashton Research Station, in 1934 he moved to Imperial Chemical Industries Ltd. to work on crop diseases at Jealott's Hill Research Station and 1946 saw him appointed head of the Department of Microbiology of the new Akers Research Laboratories at Welwyn, where he remained until 1962 and it was there that he did his most significant research. The main theme was antibiotic substances produced by fungi and the most notable discovery that of griseofulvin which is used world-wide for the therapy of fungal infections of the skin. Another important line of work was on gibberellic acid and other gibberellins as plant hormones which found valuable applications in agriculture and horticulture.

Brian was elected FRS in 1958 and became Regius Professor of Botany at Glasgow in 1962, moving to Cambridge as head of the Botany School in 1968. He was president of the British Mycological Society (1959, 1965), the Association of Applied Biologists (1961), the Society for General Microbiology (1965), and the Cambridge Philosophical Society (1978). He also served on the Agricultural Research Council (1966-76), was awarded an honorary DSc by the University of Hull (1978), and created CBE (1975). *Biogr. RS* **27**: 103-30, *port., bibl.*, 1981; *TBMS* **76**: 1-2, *port.*, 1981.

BRIERLEY (William Broadhurst; 1889-1963) was, in the words of *The Times* obituary, 'a leader and stimulator of research and a born expositor' and many of his colleagues and students were always grateful to have come under his influence. Born in Manchester, Brierley was brought up near the breadline. At 14 he became a pupil teacher and during 1907-9 taught in a Manchester elementary school. In 1911 he achieved a first class degree, and was awarded several prizes, at Manchester University while earning a living by giving evening classes on botany and nature study to schools and colleges. Appointed lecturer in applied botany at Manchester, in 1914 he moved to the newly established Board of Agriculture's Plant Pathology Laboratory at Kew from where he published on a range of plant diseases. During the war, after serving in the Artists' Rifles, he was invalided out in 1916 and two years later appointed head of a new department of 'mycology' (later renamed 'plant pathology') at Rothamsted Experimental Station for which

(and the department of entomology headed by A. D. Imms, (1880-1949)) purpose-built laboratories were designed and opened in 1924. Under Brierley's direction the department gained an international reputation but in 1934 he moved to the chair of agricultural botany at Reading University (where he was soon joined by one of his Rothamsted plant pathological colleagues, **R. H. Stoughton**, as professor of horticulture).

Brierley was a cultured sociable man, a meticulous editor, and a perceptive reviewer. He edited the *Annals of Applied Biology* for 25 years and for a similar period reviewed, single-handed, advances in biological and medical sciences for the *Annual Register*. He was much in demand as a fluent and stimulating lecturer and his correspondence kept him in touch with an international circle of professional friends. Devoted to walking in the Alps, he spent his last years in the Lake District, at Newlands, near Keswick. See also **J. H. Smith**. *Nature* **198**: 133, 1963; *AAB* **51**: 509-10, 1963; *D*: 88.

BRIGHT, T. B., see Morris, L. E.

BRITON-JONES (Harry Richard; 1893-1936), plant pathologist, graduated ARCS in 1914 (DSc, Lond., 1926) and during 1914-18 saw war service in the Royal Garrison Artillery and was mycologist to the Ministry of Agriculture, Egypt, from 1920-23 and at the Long Ashton Research Station, 1923-26. He then became professor of mycology at the Imperial College of Tropical Agriculture, Trinidad (and Dean of the College), 1926-36. Author of *Diseases and Curing of Cacao*, 1934. His fungi are at **IMI**. *Nature* **138**: 913, 1936; *Kew Bull.* 1936: 30; *Times* 4 Nov. 1936.

BRITAIN (Thomas; 1806-84), FLS (1870), naturalist and microscopist, and an accountant by profession, was born at Sheffield, Yorks. He settled at Manchester about 1842 and in 1858 was one of the founders of the Manchester Microscopical Society of which, in 1888, he served as president. He was a popular speaker and published on a variety of topics including *Microfungi, When and Where to Find Them*, 1882 (Manchester). He died at Urmston, Lancs. *DNB* **1**: 221; *D*: 89 (*BB*: 45).

BROKESHIRE (Fredrick Adolphus; 1866-1957), amateur botanist of Barnstaple, Devon, was a school teacher by profession. He was botanical secretary (1931-47) and recorder of cryptogams (1942-53) of the Devonshire Association and was particularly interested in fungi. He contributed a list of fungi and lichens to M. G. Palmer's *The Fauna and Flora of the Ilfracombe District of North Devon*, 1946: 238-45. *D*: 91.

BROADHEAD (Charles Herman; ca 1860-1920, a nurseryman of Thongoridge, was a Yorkshire naturalist who served on the YNU Mycological Committee. *Naturalist* 1920: 323, *port.*; *Blackwell* (1961): 66; *D*: 90.

BROADBENT (Albert; 1891-1962), a tailor of Huddersfield, Yorks., and a member of the Yorkshire Naturalists' Union was interested in myxomycetes. *D*: 90.

BROOK (George; 1857-93), FLS (1879), naturalist, was born at Huddersfield, Yorks., and after two years' study at Owen's College, Manchester, joined his father in

business at Huddersfield. Marine biology was one of his special interests and he established an aquarium at his home. From 1884-93 he was lecturer in comparative embryology at Edinburgh University and during 1884-7 investigated *Saprolegnia* on behalf of the Scottish Fisheries Board. He served a term as secretary of the Huddersfield Naturalists' Society and founded the Scottish Microscopical Society. *Proc. LS* 1893-4: 30-1; D: 91 (BB: 46).

BROOKS (Fredrick Tom; 1882-1952), born at Wells, Somerset, was a brilliant student and on graduating at Cambridge (Emmanuel College) with first class Honours was awarded a Frank Smart studentship. In 1905 Professor **Marshall Ward** appointed him junior demonstrator in botany in the Botany School at Cambridge and on Marshall Ward's death the following year Brooks, at the age of 24, took over the teaching of mycology and plant pathology. Subsequently he became university lecturer, reader in mycology, and finally, from 1936 to his retirement in 1948, professor of botany. Brooks spent 1913-14 investigating diseases of the rubber tree in the Federated Malay States and after his return, rejected for army service because of poor eyesight, spent 1917-19 as plant pathologist in a newly established government Department of Food Production.

Brooks built up a major teaching and research centre at Cambridge where he trained a hundred or so mycologists and plant pathologists who practised both in the U.K. and world-wide (cf. **W. Brown**). He introduced the study of bacterial diseases of plants at Cambridge under **W. J. Dowson** and is remembered for his investigations on silver leaf of plum and on cereal diseases. His *Plant Diseases*, 1928 (edn 2, 1953) was for long the standard British text. He was president of the British Mycological Society (1921) and Section K (Botany) of the British Association (1935), elected FRS (1931), and appointed CBE (1947). He also served on the Agricultural Research Council and many other official bodies and was influential in determining policy on diverse aspects of British agriculture. See also **F. C. Bawden, G. H. Brenchley, T. F. Chipp, A. D. Cotton, C. E. Harrold, C. R. Metcalfe, W. C. Moore, J. Percival, D. H. Scott, A. Smith**. *Obit. RS* 8: 341-54, *port. bibl.*, 1953; *TBMS* 36: 177-9, *port.*, 1953; *AAB* 39: 617-9, 1952; *Proc LS* 163: 254-6, 1952; D: 92.

BROOME (Christopher Edmund; 1812-86) has earned a permanent place in British mycology for his joint authorship with **M. J. Berkeley** during 37 of the 48 years of their publication of the 2050 'Notices of British fungi', 1837-85. Some 550 of the taxa dealt with in these Notices are attributed to 'B & Br.'

Broome, the son of a solicitor, was born at Berkhamsted and after a private education left school at 18 to be coached by the curate of Swaffham Prior, Cambs., with a view to taking Holy Orders. He entered Cambridge (Trinity Hall) in 1832, graduated four years later, but conscientious scruples prevented him from entering the Church. In 1837 he married (Muriel Charlotte Hornman, 4th daughter of Rev. John Bushby of Chelsea) and then lived successively near Bath, at Clifton (9 years), and finally Elmhurst, Batheaston. Broome began to develop an interest in natural history at Swaffham Prior and benefitted, as did so many naturalists of

that time, from the influence of **J. S. Henslow**, professor of botany at Cambridge, devoting much time to this pursuit after marriage. His publications include several on the fungi of Wiltshire (1864) and the neighbourhood of Bath (1870-83) and, in addition to the Notices, he collaborated with Berkeley in describing fungi from Ceylon (Sri Lanka) and Queensland. He amassed a herbarium of 40,000 specimens which is now at the British Museum (Natural History) together with much of his correspondence. Berkeley named the African genus *Broomeia* in his honour. Broom is also always remembered for his interest in truffles and in **Worthington Smith's** iconography the symbol for Broome was a rake. See also **A. Bloxam, G. K. H. Thwaites**. *Proc. LS* 1886-7: 34-5; *J. Bot* 25: 148-50, *bibl.*, 1887; *D*: 92 (*BB*: 47).

Figure 5. Fredrick Tom Brooks (1882-1952)

BROWN (Horace Tabberer; 1848-1925), FRS (1889), FLS (1898), of Burton-on-Trent, brewer and biochemist, studied the biochemistry of brewing and fermentation. *Nature* 115: 307-8, 1925; *D*: 94 (*BB*: 48).

BROWN (William; 1888-1975) was born at Middlebie, near Annan, Dumfriesshire, of farming stock and he retained a feel for the land throughout his life. He was never happier than when cultivating his experimental plots or working in his large garden at home. After basic schooling and gaining an Edinburgh degree in mathematics and physics, many medals, and a life-long interest in the classics, in 1912 he moved to the Royal College of Science (Imperial College as it is now), at first with a scholarship to work under **V. H. Blackman**, where he became

established, in 1928 as a full professor of plant pathology and during 1938-53, as successor to Blackman, professor of botany and head of the Botany Department. He did pioneering work on the physiology of parasitism (started at the instigation of Blackman) and although he summarised his findings at intervals in notable reviews it was **Lilian Hawker**, his former assistant lecturer, who wrote the book on fungal physiology he could have written. Brown was a man of few words, although he could be an interesting talker, and at meetings was renowned for asking pertinent questions.

For a generation after the 1914-18 war it seemed that every mycologist and plant pathologist south of the Border had been directly or indirectly influenced by

Figure 6. William Brown (1888-1975)

Brown or by **F. T. Brooks** at Cambridge. Brown also trained many post-graduate students from overseas, particularly, from India and Egypt. Brown was elected FRS in 1938 and served as president of the British Mycological Society (1933), Association of Applied Biologists (1933-4), and Section K (Botany) of the British Association (1951). See also **M. P. Topping**. *DNB (1971-80)*: 97; *Biogr. RS 21*: 155-74, *port., bibl., 1975*; *TBMS 65*: 343-5, *port., 1975*; *Mycologist 5*: 40, *port., 1991*; *D*: 97.

BRUTON (William; 1775-1806), FLS (1806), bryologist of Rippon, Yorks., contributed lichens to **J. Sowerby & J. E. Smith**, *English Botany. Seaward (1977)*: 39, 40; *D*: 100 (*BB*: 51).

BRYANT (Charles; *d.* 1799?), brother of **H. Bryant**, was a schoolmaster of Magdalen Street, Norwich. He paid particular attention to *Geaster*, noted the use by farmers of puff-ball spores as a styptic for horses and cattle, and was the author of *Flora Diatetica; or a History of Esculent Plants, Both Domestic and Foreign*, 1783, which includes a rather muddled account of eight species of esculent fungi. **Berkeley** in 1836 named *Geaster bryantii* ('Mr Bryant's starry puff ball') in his honour. *G. J. Cooke (1937): 196-8; SC I: 385; D: 100 (BB: 51).*

BRYANT (Rev. H.; 1721-99) brother of **C. Bryant**, while vicar of Langam, Norfolk, for 'amusement, or the having something to do' took up the study of bunt of wheat (*Tilletia tritici*) and published *A particular enquiry into that disease commonly called brand; being an attempt to show that the general practice of drenching the seed in salt and water, soap lees, quick-lime, &c. are not only ineffectual for preventing the disorder, but are destructive to the seed*, 58 pp., 1874, Norwich. *DNB I: 243; D: 100 (BB: 51).*

BUCKMAN (James; 1816-84), geologist and botanist, after serving as a pupil of a surgeon-apothecary at Cheltenham (where he was born) studied chemistry, botany and geology in London. From 1848-63 he was professor of botany and geology at the Royal Cirencester Agricultural College and then retired and farmed on scientific principles at Bradford Abbas, Dorset, where he died. Buckman contributed an account of the edible fungi of Stonehouse to Witchell & Strugnell's *Flora and Fauna of Gloucestershire*, 1892. *DNB I: 249; D: 102 (BB: 52).*

BUCKNALL (Cedric; 1849-1921), botanist, was organist at Clifton, Bristol, 1876-1921. His main contribution to mycology was a list of fungi of the Bristol district in 14 parts (*Proc. Bristol Nat. Soc.* NS 2-6, 1878-91). His drawings of Bristol Fungi are at Kew (box 162)24 *Agaricus (Lepiota) bucknalli* B.& Br. *D: 102 (BB: 52).*

BUDDIN (Walter; 1890-1962), plant pathologist, was born in London and educated at St Olave's School and Cambridge University (Sydney Sussex College). In addition to graduating BA (later MA) he took the Cambridge Dip. Agric. As holder of a Ministry of Agriculture scholarship, Buddin spent 1912 at Rothamsted Experimental Station investigating 'Plant nutrition and soil problems' and he also visited Canada and the U.S.A. During the 1914-18 war he served in the Royal Army Medical Corps (part of the time in Egypt where he contracted paratyphoid fever). After the war he spent a year at the Cheshunt Research station working with **W. F. Bewley** on the contamination of glasshouse water supplies by spores of plant pathogenic fungi.

From 1921-46 Buddin held the post of economic mycologist in the southern Province and was based at Reading and when the National Agricultural Advisory Service was established in 1946 became a Grade I Adviser and remained at Reading until his retirement in 1956. Buddin got on well with growers and farmers and was a very successful adviser. He generously passed on much interesting material to specialists.

An active member of the British Mycological Society (Treasurer, 1947-61, twice Vice-President (he refused presidential nomination), and an Honorary

Member, 1954), he was a regular forayer and as secretary of the Plant Pathology Committee instituted the annual phytopathological day visits to research stations. In 1959 the Association of Applied Biologists also elected him to membership and Buddin was the first person to become an honorary member of both societies. See also **A. D. Cotton**. *TBMS* **46**: 295-6, *port.*, 1963; *Nature* **196**: 811-2, 1962; *D*: 102.

BUDDLE (Rev. Adam; ca 1660-1715), botanist, was born in Lincolnshire and graduated from Cambridge (St Catherine's College), BA (1681), MA (1685). For a time rector of Great Fambridge, Essex, he had a high reputation as a botanist (particularly cryptogamist). His *Hortus Siccus* (now 114-130 of the Sloane Herbarium at the British Museum) contains a few fungi (and as 'very few of the older botanists attempted to preserve fungi ... those in Buddle's herbarium are of particular interest'; Ramsbottom (1932): 9) and lichens. The latter, together with specimens collected by **Thomas Willisel** (now in the Sherardian Herbarium, Oxford), are among the oldest lichen material extant (fide Hawksworth & Seaward (1977): 5). *DNB* **1**: 249; *SC* **1**: 398; *D*: 102 (*BB*: 152).

BULL (Henry Graves; 1818-85), best known for his *Herefordshire Pomona*, 1876-85, was born in Northants, and qualified MD (Edinburgh) after a year's study in Paris. Appointed to the Northampton General Infirmary in 1834 he moved to Hereford in 1841 where he held posts at the Hereford Dispensary (1842) and the General Infirmary (1864) and was from 1846 medical officer to the Hereford Prison.

An active member of the Woolhope Club (editing the Club's *Transactions* from 1866), he developed a deep interest in larger fungi and at the Royal Botanic Gardens, Kew, there are four bound volumes containing 430 of his watercolour drawings of this group. In 1868 the Royal Horticultural Society, at the instigation of the Rev **M. J. Berkeley**, offered prizes (provided by Lady Dorothy Neville and Mrs Lloyd Wynne) for the best collections of edible fungi and Dr Bull won the first prize. Later in the same year Dr Bull circulated a notice to members of the Woolhope Club announcing that 'An Extra Field Meeting will be held at Hereford, for a Foray amongst the Fungusses on Friday, October 9' and thereby introduced the term 'foray' for a mycological field meeting, a usage now of international currency. This meeting, to Holm Lacey, a local park, was duly held and was the first of the series of annual fungus forays (several of which were the subject of cartoons by **Worthington G. Smith**) held by the Woolhope Club up to 1892 when it was replaced by the forays of the Yorkshire Naturalists' Union (see **W. D. Roebuck**) and, from 1897, those of the British Mycological Society (see **A. Clarke**). See also **W. D. Roebuck**. *BMJ* 1885 **2**: 999; *Lancet* 1885 **2**: 1075; *Mary P. English, Mordecai Cubitt Cooke, 1987; 136-8, port.; D*: 103 (*BB*: 53).

BULLER (Arthur Henry Reginald; 1874-1944) spent the greater part of his working life as professor of botany at the University of Manitoba (1904-36) but he never relinquished his British nationality and during the time he was in Canada made annual working visits during the summer months to Birmingham or Kew and played an active part in the British Mycological Society. He crossed the Atlantic

some 65 times, by sea, and intended to finish on an even number but in September 1939 he was trapped in North America by the outbreak of war and died in Winnipeg of a brain tumour on 3 July 1944.

Buller was born in Birmingham and studied botany under W. Hillhouse at Mason College (which became Birmingham University) completing his graduation in 1897. For the next four years he worked in Germany in the laboratories of Wilhelm Pfeffer (Leipzig) and Robert Hartig (Munich) and at the Marine Biological Station, Naples, after which he returned to Mason College as a lecturer.

Up to the turn of the century almost every noted British mycologist was a taxonomist. Buller had experienced the 'new botany' in Germany, Hartig had aroused his interest in fungi, and being an ingenious experimenter he devoted a life of research to the activities of fungi especially spore discharge and heterothallism (including sexuality in rusts). He wrote an unpublished history of mycology and edited (and largely financed) the handsome 3-volume English translation by **W. B. Grove** of the Tulasnes' *Selecta Fungorum Carpologia*, 1931. Buller, who wrote a book on the history of wheat growing in Canada (*Essays on Wheat*, 1919) and a botanical text for students (*Practical Botany*, 1929), had a good knowledge of the British and Canadian flora, and retained zoological and geological interests originating from his student days. He also had a compulsion to expound his findings. He was well read, a confirmed versifier (his relativity limerick is included in the *Oxford Dictionary of Quotations*), a capable pianist, and an expert billiard player.

Buller was an eccentric bachelor. His dress became somewhat noticeable as he always employed his pre-1904 Birmingham tailors to make his striped trousers and black jacket of pre-First World War cut (and he sewed into the lining of each jacket a £5 note for emergency use). Like that other eccentric bachelor Samuel Butler (the author of *Erewhon*) Buller was anxious that mental, if not bodily offspring should survive him. He left a remarkable memorial in the seven volumes of his personally financed *Researches on Fungi*, 1909-50. which are still a source of suggestive ideas. He kept diaries and notebooks, and journals of particular trips (such as his visit to India in 1938), while for many years he preserved the correspondence he received and kept copies of letters he wrote. This hoard of papers, apart from a small deposit at the Royal Botanic Gardens, Kew, is stored in the Buller library of the Research Branch, Canada Department of Agriculture, Winnipeg, to which Buller bequeathed his books and where his ashes are deposited. *DNB* 2: 2450; *DSB* 2: 282-3; *Obit.*, *RS* 5: 51-9, *port.*, *bibl.*, 1945; *Nature* 154: 173, 1944; *SC* 1: 401; *D*: 103.

BULLOCH (William; 1868-1941), MD (Aberdeen, 1894), FRS (1913), bacteriologist, was bacteriologist at the London Hospital (from 1897) and the first Goldsmiths' Company's professor of bacteriology in the University of London. He is particularly remembered for *The History of Bacteriology*, 1938 (reprint, 1960) which covers aspects of the recognition of microbial pathogenicity by both

bacteria and fungi. *DNB 2: 2541; Obit., RS 3: 819-52, port., bibl., 1941.*

BUNKER (Henry James; 1897-1975), was one of the leading British microbiologists of his generation. Born in London, after serving in the infantry during the last three years of the First World War he graduated in botany from Cambridge (St Catherine's College) and joined the Royal Naval Cordite Factory, Holton Heath, Dorset, as assistant bacteriologist under A. C. Thaysen where his investigations included an intensive study of cellulolytic organisms (one result of which was Thaysen & Bunker's book *Microbiology of Cellulose, Hemicellulose, Pectin and Gums*, 1927) and biodeterioration caused by sulphur bacteria.

In 1933 Thaysen's group moved to the DSIR's Chemical Research Laboratory in the grounds of the National Physical Laboratory at Teddington, Middlesex, and it was then (1936) that Bunker published his monograph on the sulphur bacteria. During the 1939-45 war one of the first pilot plants for the production of food yeast *Torulopsis (Candida) utilis* was set up at Teddington (see **T. Butlin**) and subsequently a full-scale plant was established in Jamaica.

In 1944 Bunker became director of the Research Department of Barclay Perkins Brewery at Southwark, on the south bank of the Thames in central London, where he remained until the brewery was taken over by Courage & Co. in 1956 when Bunker's laboratory was disbanded and he set up as a very successful freelance microbiological consultant.

Bunker was a many-sided man. He was one of the founders of the Society for General Microbiology (of which he was the first treasurer (1945-51), served as president (1952), and elected as an Honorary Member (1967)). He was president of the Society of Applied Bacteriology (1946-9) and of the Institute of Biology (1967-9), and held many other offices and was awarded many honours including an Honorary DSc by Brunel University in 1969. Bunker had a ready wit and was an inexhaustible source of probable and improbable anecdotes which made him much in demand as an after dinner speaker, particularly by the Society for General Microbiology. *J. gen. Microbiol. 93: 1-7, port., bibl., 1976.*

BUNTING (Robert Hugh; 1879-1966), botanist and plant pathologist, was from 1894-1910 a mycologist at the British Museum (Natural History) and spent the next three as botanical collector to the Liberian Rubber Company. Appointment as Assistant Director Agricultural Research in Sierra Leone followed and then (1914-29) he was Government mycologist (plant pathologist] in the Gold coast (Ghana) where he became Assistant Director of the Department of Agriculture and where he collaborated with **H. A. Dade** in their monograph *Gold Coast Plant Diseases*, 1924. On his return to England Bunting worked at the Stored Products Research Laboratory and the Imperial College Field Station at Slough, Bucks. (1929-34) and finally as director of the Dorset County Museum (1940-44). His collections of fungi are at IMI. *Proc. LS 178: 89, 1967; D: 105.*

BURGESS (James John; 1863-1934), see Keith, J.

BURGESS (Rev. Dr John; 1725-95), MA (Glasgow, 1747), DD (Edinb., 1769), lichenologist, of Kirkmichael, Dumfries. Both he and his son, **J. B. MacGarroch**,

contributed lichens to *English Botany* (see **J. Sowerby**, 1857-1822). *D: 107 (BB: 55)*.

BURGESS (Robert; b. 1900), microbiologist, was born in Nottingham, educated at Sexey's School, Bruton, Somerset, and, after war service in the RAF, attended University College, Nottingham, from which he graduated in honours botany in 1922. After research on the bacteriology and mycology of textiles, he taught botany at the Leicester Technical School, and then became demonstrator in agricultural botany at Leeds University in 1925. He gained the MSc (Lond., 1927 in soil microbiology) and a PhD (Lond., 1932; in wool microbiology) and was microbiologist to the Wool Industries Research Association, 1927-35, dairy bacteriologist at the Lancashire C. C. Farm Institute, nr. Preston, 1935-45, and finally moved to Geigy & Co., Manchester, where he worked on DDT. See **L. D. Galloway**.

BURKILL (Ethel Maud (née Morrison); 1874-1970), the wife of I. H. Burkill (1870-1965) who was director of the Botanic Gardens, Singapore from 1921-25, collected and made drawings of fungi for the Singapore Botanic Gardens. Both she and her husband were born, educated, and died in the U.K. **G. Masee** named *Annularia burkillae* in her honour. *D: 107*

BURRELL (William Holmes; 1865-1945), a Yorkshire pharmacist, curator of the Ingham Herbarium, Leeds University, was a bryologist who contributed records of Norfolk myxomycetes (*Trans. Norf. Norwich Nat. Soc.* **9**: 106, 1910) and had some interest in lichenology. *D: 109*.

BURROWS, Mrs P. M., see Stockdale, P. M.

BUTLER (Sir Edwin John; 1874-1943) member of a distinguished and intellectual Irish family, was born at Kilkee, Co. Clare, studied medicine at Queen's College, Cork, and qualified but never practised. **Marcus Hartog**, professor of natural history at Cork, stimulated Butler's interest in water moulds and on being awarded an 1851 Exhibition 2-year travelling scholarship he worked in Paris (under P. van Tieghem and M. Cornu), Antibes (where G. Parault introduced him to chytrids), and Freiburg (F. Oltmanns) and finally at the Royal Botanic Gardens, Kew, with **G. Masee** and **E. S. Salmon**.

Figure 7. Sir Edwin John Butler (1874-1943)

In 1900, on the recommendation of Kew, Butler was appointed as the first Cryptogamic Botanist to the Government of India. He was stationed first at Calcutta, then Dehra Dun, Cawnpore, and finally Pusa (1905) when he became Imperial Mycologist. For the next fifteen years Butler was very productive and broke new ground in both mycology (e.g. his monograph on *Pythium*, 1907) and tropical plant pathology. Much of the latter is summarised in his classic text *Fungi*

and Disease in Plants, 1918.

In 1920 Butler was appointed director of the newly created Imperial Bureau of Mycology situated on Kew Green in two houses formerly occupied by the Board of Agriculture's Plant Pathology Laboratory. During the next decade Butler travelled widely on behalf of the Bureau and laid a sound foundation for both its abstracting and mycological activities. In 1930 the Bureau moved to purpose-built offices and laboratories on land owned by Kew Gardens as the Imperial Mycological Institute, a unit of the Imperial Agricultural Bureaux. Five years later Butler became the first paid secretary of the Agricultural Research Council, a post held until 1941 when ill health compelled retirement. A replacement for his textbook, undertaken, with the help of S. G. Jones, appeared posthumously as *Plant Pathology*, 1949. Butler received many honours - CIE (for services in India), CMG (for his contributions to plant pathology throughout the Commonwealth) - and was knighted in 1939. Elected FRS, 1926, he was president of the British Mycological Society (1927) and the Association of Economic Biologists (1928-29). See also **H. W. T. Wager**. *Obit. RS. 4: 455-74, port., bibl., 1943; Nature 151: 552, 1943; Phytopathology 34: 149-50, port., 1944; D: 110.*

BUTLIN (Kenneth Rupert; 1896-1965), chemist, bacteriologist, microbiologist. He went to Oundle School and graduated from Cambridge (Trinity College) in chemistry. In 1929 he joined the microbiology unit of the Royal Cordite Factory at Holton Heath, Dorset. In 1933 the unit was moved to the Chemical Research Laboratory, Teddington, where Butlin spent the rest of his working life and became senior microbiologist. Butlin's main interest was in sulphur bacteria but at the beginning of the Second World War he worked with A. C. Thaysen and **H. J. Bunker** on the pilot scale production of food yeast (*Torulopsis (Candida) utilis*) for humans and animal feed (see *Food Yeast. A Venture in Practical Nutrition*, 1944; Colonial Food Yeast Ltd.). *J. Gen. Microbiol. 45: 1-8, port., bibl., 1966.*

C

CADMAN (Colin Houghton; d. 1971), BSc (Liverpool), PhD (Edinb.) FRSE, FIBiol, plant pathologist (virologist) after graduating worked on potato virus diseases at the Scottish Plant Breeding Station, Corstophine, then, after a short period at East Malling Research Station, investigated raspberry virus diseases at the botany department of University College, Dundee, and subsequently joined the Scottish Horticultural Research Institute (now the Scottish Crops Research Institute) where in 1965 he became director. He was president of the Association of Applied Biologists for 1969-70. *Rep. Scot. Hort. Res. Inst. 1971: 9110, port.*

CAIRNS (Hugh; 1904-1941) was the first student to specialise in mycology and plant pathology at Queen's University, Belfast, and in 1930 graduated as the first Master of Agriculture there. In 1928 he was appointed to the staff of the Division of

Mycology and Plant Pathology (within the Faculty of Agriculture) which was raised to departmental status in 1931, and a new chair of plant pathology created in 1945 with **A. E. Muskett** as the first professor. Cairn's main investigations were on pink rot of potato and gooseberry rust. *Irish Nat. J.* 8: 15, 1942; *Muskett (1976): 425; D: 112.*

CALDWELL (John; 1903-1974) after graduating from the University of Glasgow was awarded a PhD for plant physiological research at Cambridge (St John's College) under F. F. Blackman. In 1928 the Empire Marketing Board appointed to Rothamsted Experimental Station a cytologist (Frances M. Sheffield), an entomologist (Marian A. Hamilton (Mrs Watson), and Caldwell as plant physiologist (under the direction of **J. Henderson Smith**) to investigate general aspects of virus diseases of plants but in 1935 Caldwell became professor of botany at the University College of the South-West (from 1956 the University of Exeter) where he remained until his retirement in 1969. Several of his post-graduate research students at Exeter (e.g. **I. W. Prentice**, A. A. Brunt) made careers in plant virology. Caldwell also started a 1-year postgraduate course at Exeter on plant pathology which for a number of years was run by **S. A. J. Tarr**. *Times 30 August 1974; D: 113.*

CALLEN (Eric Otteben; 1912-70), BSc (Edinb., 1936), PhD (Munich, 1939), FLS (1941), plant pathologist, was born a British subject at Erfurt, Germany, and went to school in Edinburgh, graduating from Edinburgh University. During 1936-7 he worked for his PhD at Munich and spent 1938 at the Botanical Institute of the University of Würzburg. Next he was an assistant university lecturer at Edinburgh and after serving in the Forces (Intelligence) during the Second World War he emigrated to Canada to take up a post in the Department of Plant Pathology, Macdonald College, McGill University, and died of a heart attack while on an expedition to Peru.

His investigations covered diseases of yew, rusts, cytology of Mucorales, and soil fungi. *D:114.*

CARMICHAEL (Dugald; 1772-1827) was born at Lismore, Hebrides, and after studying at Glasgow University qualified in surgery at Edinburgh, then joined the British Army and saw service in Ireland (where he met Robert Brown), Tristan da Cunha, South Africa, and India. On retirement finding London uncongenial in 1820 he bought a small farm at Appin (which became a mycological *locus classicus*) near his old home and collected algae and more species of fungi than had hitherto been recorded for all Scotland. He sent specimens to **M. J. Berkeley**, **W. J. Hooker**; and **R. K. Greville**. *Ramsbottom (1963): 166-7; D: 118 (BB: 58).*

CARPENTER (William Benjamin; 1813-85), MD (Edinb., 1839), FLS (1856), CB (1859), LLD (1871), FRS (1874), was born in Exeter and died in London. He became Registrar of London University and was the author of *The Microscope and its Revelations*, 1856 (edn 6, 1881) and was a founding member of the Marine Biological Association. *DNB 1: 320; DSB 3: 87-9; D: 119 (BB: 59).*

CARR (John Wesley; 1862-1939), professor of biology, University College,

- Nottingham, 1898-1927, contributed lichens, fungi, and myxomycetes of Nottinghamshire to the *Victoria History of the Counties of England*, 1906. *D: 119*.
- CARRINGTON** (Benjamin; 1827-93), MD (Edinb., 1851), FLS (1861), who practised medicine at Radcliffe, Lincoln, Yeardon, and Southport and was for 18 years Medical Officer for Health at Eccles (Manchester), specialized in liverworts (hepatics). His Yorkshire lichen specimens are at Edinburgh. See **L. C. Miall**. *Seaward (1987)44; D:119 (BB:59)*.
- CARROL** (Isaac; 1828-80), lichenologist of Aghada, Co. Cork, best known for his contributions to Irish lichenology, published (*J. Bot.* **3-5**, 1865-7) three lists of British species noted since **W. Mudd**, *Manual of British Lichens*, 1861. *SC I: 460; D: 120 (BB: 59)*.
- CARROLL** (Thomas; 1837-1918), a Wexford man, was a student at the Albert Institution (1854-5) and then Head of the Agricultural Colony at Mount St Bernard, Leices., run by Cistercian Monks. In 1881 he was appointed Agricultural Superintendent at the Albert Institution, Glasnevin, and remained there until his retirement in 1902. He was mainly concerned with potato blight; at first by breeding, when hundreds of new potato varieties were tested at Glasnevin without success. He then turned to spraying with Bordeaux Mixture and did much to popularize this method. He demonstrated by experiment that blight was caused by air-borne spores and drew attention to other important diseases of potato. See also **E. J. McWeeney**. *McKay (1951): 6-9, port., 26 (bibl.); Muskett (1976): 414*.
- CARRUTHERS** (John Bennett; 1865-1910) was the son of William Carruthers (1830-1922; keeper of botany at the British Museum (Natural History), 1871-95; botanist to the Royal Agricultural Society, 1871-1909) was educated at the Royal School of Mines and the University of Greifswald. After holding posts as demonstrator in botany at the Royal Veterinary College (1892-5) and professor of botany at Downton College of Agriculture, he was, during 1897-99, cryptogamist to the Ceylon Planters' Association and published reports on cacao canker. Subsequently he became Government Mycologist at the Royal Botanic Gardens, Peradenya where he investigated diseases of cacao, tea, and rubber; the first director of agriculture to the Federated Malay States (where, in 1907, he obtained the assistance of a full time mycologist - Gallagher (who became the director of agriculture) and died as assistant director, Department of Agriculture, Trinidad. *Kew Bull. 1910: 254; Proc. LS 1910: 35; D: 120 (BB: 60)*.
- CARRUTHERS** (William; 1830-1922), see **J. B. Carruthers**.
- CARTER** (Henry Vandyke; 1831-97) served as pathologist in the Bombay Medical Service, professor of anatomy and physiology at Grant Medical College, and finally as Deputy Surgeon-General of the Indian Medical Service. In 1874 he published the classical account of mycetoma in his monograph *On Mycetoma or the Fungus Disease of India* 118 pp., 11 pl., (London). While studying mycetoma Carter submitted a specimen to the Rev. **M. J. Berkeley** in England who described a now unidentifiable fungus as *Chinosyphe carteri* Berk. (1868) from the material. *BMJ 1897 I: 1256-7; Lancet 1897 I: 1381; Ainsworth & Stockdale*

(1984): 4; D: 121.

CARTER (Thomas; ca 1840-1910), amateur botanist, was headmaster of Mill Hill School, Leicester, see **F. T. Mott**. D: 121.

CARTWRIGHT (Kenneth St. George; 1891-1964), timber mycologist, intended a career in the navy and entered the Royal Naval College but left for reasons of health and graduated from Oxford (Wadham College). He was commissioned in the Rifle Brigade in 1914 and later transferred to the Education Corps. After the war he spent a short time at Kew, then held a DSIR grant to study dry rot in cold stores at the Imperial College and in 1927 was appointed as the first mycologist at the newly established Forest Products Research Laboratory, Princes Risborough, where he remained until his retirement in 1948. With **W. P. K. Findlay** wrote: *The Principal Rots of the English Oak*, 1936; *Decay of Timber and its Preservation*, 1948. Cartwright was an expert gardener and served on the Lily Group of the Royal Horticultural Society and on the Committee of the *Primula* and *Auricula* Society. He was president of the British Mycological Society, 1937. (See also **P. Groom**). *TBMS* 48: 151, 1965; D: 121.

CASTELLANI (Marchese Sir Aldo; 1877-1971), a talented and energetic man, made a number of discoveries in tropical medicine, held a diversity of posts, and during the inter-war years had an international reputation as a medical mycologist.

Born in Italy he studied under W. Kruse (1864-1943) in Bonn, then **P. Manson** in London, and in 1902 while in Uganda showed the causal agent of sleeping sickness to be a trypanosome. From 1906 to 1915 he served as bacteriologist to the government of Ceylon (Sri Lanka) where in addition to elucidating the aetiology of yaws was the first to describe *Trichophyton rubrum*, *Candida tropicalis*, *C. krusei*, and other well-known pathogenic yeasts. While in Sri Lanka he collaborated with **A. J. Chalmers** in writing their *Manual of Tropical Mmedicine*, 1910, which became a standard text and the 3rd edition (1919) was much used by medical mycologists. During the 1914-18 war he served the Italian government and became Lieutenant Colonel in the Royal Italian Medical Service and Admiral in the corresponding branch of the Navy. After the war he was consultant to the Ministry of Pensions in London, on the staff of the Ross Institute, lecturer in medical mycology at the London School of Hygiene & Tropical Medicine, and professor of tropical medicine at Tulane University, New Orleans, and published *Fungi and Fungous Diseases*, 1928 and some 200 mycological papers. In addition he had a large and fashionable Harley Street practice.

After the Second World War (in which he became Surgeon-General to the Italian forces) he lived in Portugal as medical advisor to the Italian Royal Family in exile, wrote an autobiography (*Man, Microbes, and Monarchs*, 1960), and continued his microbiological researches. *BMJ* 1971 **4**: 175, *port.*; *Lancet* 1971 **2**: 883; *J. trop. Med. Hyg.* **74**: 233-7, 1971; *Mycopathologia* **8** (2), 1957, *port.*; *Ainsworth & Stockdale* (1984); 4.

CAYLEY (Dorothy Mary; 1874-1955), mycologist and plant pathologist, was the

Figure 8. Marchese Sir Aldo Castellani (1877-1971)

daughter of Sir Richard and Lady Cayley. She was on the staff of the John Innes Horticultural Institution from its establishment in 1910 until 1948. She published on die-back of fruit trees and other phytopathological topics, mushrooms, and transmitted breaking in tulips by grafting. *John Innes Hort. Inst. Rep.* 1938; *D*: 124.

CHAIN (Sir Ernst Boris; 1906-79), FRS (1949), biochemist, was born in Berlin, the son of a chemist and industrialist of Russian origin, and came to England as a Jewish refugee in 1933. After working in London and Cambridge, in 1935 he moved to Oxford to work with **H. W. Florey** where he studied snake venom and lysozyme, and finally the chemical structure of penicillin which, in 1945, led to his sharing the Nobel prize for medicine with Florey and **A. Fleming**. Chain was subsequently director of the International Centre for Chemical Microbiology at the Istituto Superiore di Sanita, Rome, and finally, from 1961-73, professor of biochemistry at the Imperial College of Science, London. *DNB* (1971-80): 132-4; *Biogr. RS* **29**: 43-91, *port., bibl.*, 1983; *R. W. Clarke, The Life of Ernst Chain*;

Ppenicillin and Bbeyond, 1985.

CHALMERS (Albert John; 1870-1920) after qualifying MD at Liverpool, specialized in tropical medicine. While serving as dean of the Medical School at Colombo, Ceylon (Sri Lanka) (1901-2), collaborated with **A. Castellani** (q.v.). Later he became director of the Wellcome Tropical Research Laboratory, Khartoum (1913-20), where he collaborated with **R. G. Archibald** on investigations on mycetoma. This collaboration is particularly notable for the differentiation made between mycetomas caused by *Madurella mycetomatis* and other fungi (eumycetoma) and those caused by actinomycetes (actinomycetoma). *BMJ* 1920 **1**: 657-8; *Lancet* 1920 **1**:889; *J. Trop. Med. Hyg.* **23**: 94-6, 1920; *Ainsworth & Stockdale* (1984): 4.

CHAMBERS, H. S., see Williamson, H. S.

CHAPMAN (Alfred Chaston; 1868-1932), FRS (1920), microbiologist, was a consulting chemist and public analyst who graduated from University College, London. He developed an interest in yeasts and other micro-organisms and was president of the Royal Microscopical Society and the Institute of Brewing as well as the Institute of Chemistry and the Society of Public Analysts. In his Cantor lectures to the Royal Society of Arts he reviewed the industrial uses of micro-organisms. *Nature* **130**: 654-5, 1932; *D* 125.

CHAPMAN (William; 1749-1832), of Whitby, Yorks., engineer, author of *Treatise on the Prevention of Timber from Premature Decay*, 1817. Cf. **G. Birkbeck, R. Dickson, M. Faraday, J. Knowles**. *DNB* **1**: 349.

CHARLESWORTH (Joseph; 1851-1920), orchid specialist and nurseryman of Heaton Barton and, from 1908, Haywards Heath, Surrey, who successfully applied commercially the technique of raising *Odontoglossum* and other orchids from seed sown on a nutrient medium on which the appropriate mycorrhizal fungus was growing. *TBMS* **8**:34-5, 1922; *D*:126.

CHEEL (Edwin; 1872-1951), lichenologist, *b.* Chartham, Kent; *d.* Sydney, Australia. Emigrated to Australia where he became custodian of lichens and fungi at the National Herbarium, Sydney. *Butler* (1929): 4; *D*: 127.

CHEESMAN (William Norwood; 1847-1925), a draper of Selby, Yorks., had life-long and wide interests in natural history and, later, archaeology. He was a good general botanist but devoted much attention to fungi, particularly myxomycetes, and in recognition of the prominent work he did for the Yorkshire Naturalists' Union's Mycological Committee he was elected president of the Union for 1916. He was a Foundation member of the British Mycological Society of which he was elected president for 1925 (the year of his death in Selby) but ill health prevented him from giving the customary presidential address. The Society's Cheesman Fund (now the Benefactors' Fund), to which he made the original donation of 100 guineas before his death, was named in his honour. See also **A. Clarke**. *TBMS* **11**: 1-4, *port.*, 1926; *D*: 128 (*BB*: 62).

CHIPP (Thomas Ford; 1886-1931), DSc (Lond., 1928) born in Gloucestershire, was gardener at Sion House, Middlesex (1904) and then Kew Gardens (1906) where

he was transferred to the Herbarium. He graduated (BSc Lond., 1909) from Birkbeck College from where, after a short period as a demonstrator, he was appointed to the Forestry Department of the Gold Coast (Ghana) which sent him to study the forests of the Straits Settlements.

After service in the army during the 1914-18 war (winning the Military Cross (1916) and being wounded), he became director of the Gardens of the Straits Settlements where he published on the fungi of Malaysia (*Gard. Bull. S. S.* **2**: 311-418; host index, **2**: 231-8, 276-82), timber decaying fungi (*ibid.* **2**: 429-32), and the fungus biota of *Hevea brasiliensis* (*ibid.* **2**: 186-92). He had wide interests in forestry and conservation. With A.G. Tansley edited *Aims and Methods in the Studies of Vegetation*, 1926 (an outcome of the Imperial Botanical Congress held in London in 1924) and was a joint secretary (with **F. T. Brooks**) of the 5th International Botanical Congress (Cambridge, 1930). *Nature* **128**: 141-2, 1931; *Proc. LS 1931-32*: 169-74; *D*: 129.

CHITTENDEN (Frederick James; 1873-1950), plant pathologist and horticulturalist, was born in West Ham and after teaching posts in botany and biology (Woolwich Polytechnic, 1892-1900; Essex County Council, 1900-7) became director of the Horticultural Society's Laboratory at Wisley (1907-19), Director of the Wisley Gardens (1919-31), and keeper of the Lindley Library (1931-40). He wrote numerous papers on diseases of flowers and vegetables (including the rusts of Essex (*Essex Naturalist* **13**, **15**, 1904, 1907) and a book, *The Garden Doctor*, 1924. He edited the Royal Horticultural Society's *Journal* from 1908-39 and the *RHS Dictionary of Gardening*, 1951. He was awarded the VMH in 1917, and the Veitch Memorial Gold Medal, 1947. *J. Roy. Hort. Soc.* 1950: 424-6, port.; *Times* 8 Aug. 1950; *WWW* (1940-50): 214; *D*: 129.

CHURCH (Arthur Henry; 1865-1937), BSc (Lond., 1889), DSc (1904), FRS (1921), was lecturer, then reader, in botany at Oxford University and the author of *Elementary Notes on the Morphology of Fungi*, 1920 (Bot. Mem.7). *Obit. RS 1936-8*: 433-43, port.; *Nature* **139**: 870-1, 1937; *D*: 130.

CLARK (John Aubrey; 1826-90), mycologist (a surveyor by profession), of Street, Somerset, corresponded with **M. J. Berkeley** & **C. E. Broome** (*Hygrophorus clarkii* B. & Br., 1873) and also **M. C. Cooke** and **W. G. Smith**. His fungus drawings are at Kew (**K**). *J. Bot.* 1898: 313; *D*: 131 (*BB*: 64).

CLARK (Malcom Charles; 1911-91), of Birmingham was attracted to natural history from childhood and made a major contribution to the computer-mapped *Flora of Warwickshire*, 1971. Later he developed mycological interests. First in myxomycetes, then discomycetes and discovered at least 48 new species. He made important contributions to, and edited, *A Fungus Flora of Warwickshire*, 1980, which records 2,600 species for the county. He also collected on the Isle of Mull and at Slapton, Devon, and contributed to the Warwickshire Records Centre. He joined the BMS in 1966 and was awarded the Society's Benefactors Medal for 1988 (*Mycologist* **3**: 47, 1989) and the Linnean Society's Bloomer Award for 1987 (*Linnean* **4**: 38-39, 1988). His herbarium is at the RBG, Kew.

Trematosphaeria clarkii Sivanesan was named in his honour. *Mycologist* **6**: 55, 1992; **7**: 88 port.

CLARKE (Alfred; 1848-1925) as a young man moved from Winchester to Huddersfield where he worked as a chemist and soon became assistant to George Jarman who ran chemistry classes at the Huddersfield Mechanics Institute (later Technical College). For 15 years the two of them investigated problems in the woollen industry when Clarke became a consultant chemist and worked from home. Clarke was a keen naturalist and took an active part in local natural history activities becoming president of the Huddersfield Natural History Society, 1886, which he served as secretary, 1891-9. He became very friendly with **C. Crossland** and they did much collecting together. Both played prominent parts in the Yorkshire Naturalists' Union and Clarke, with his reputation for meticulous documentation, was appointed the first official recorder of the YNU Mycological Committee. It was Clarke's compilations that enabled Masee and Crossland to produce their *Fungus Flora of Yorkshire*, 1902-5, and Clarke added another thousand records to that work (see **R. C. Fowler Jones**). Clarke's herbarium and papers are now at the Tolson Memorial Museum, Huddersfield.

Clarke was an expert photographer (specializing in stereographic work) and a competent draughtsman but he was rather impatient and unapproachable, and did not suffer fools gladly. He played a part in founding the British Mycological Society. When the annual forays of the Woolhope Club (see **H. G. Bull**) were discontinued, the tradition was maintained in Yorkshire by the Yorkshire Naturalists' Union (see **W. W. Fowler**) and in the late eighteen-nineties the need was felt for a national mycological society. It was at the Huddersfield foray of the YNU of 1895 that Alfred Clarke entertained to tea at his home at 16 St Andrew's Road **C. Crossland**, **M. C. Cooke**, **C. Rea**, **G. E. Masee**, and **W. W. Fowler**, when it was decided that at the next annual foray a national mycological society should be founded. After tea Clarke took a photograph of the group. It was at Cheeseman's home in Selby the following year that the final plans were laid and later in the day at the Londesborough Arms (the foray headquarters) that the British Mycological Society was formally established with **G. E. Masee** as president, **Crossland** as treasurer, and **Carleton Rea** as secretary.

'The two leading ideas of the Society are as follows:- (1) An annual gathering of a week's duration to be held at a new locality each year for the investigation of the mycological flora of Great Britain. (2) The publication of an annual report and resumé of work - both British and continental - dealing with mycology for the current year. Sherwood forest was suggested as a suitable place for the first foray. About a score of members were enrolled' (*The Naturalist* 1896: 357). See also **W. D. Roebuck**. Clarke's daughter (who made coloured drawings of larger fungi, married the botanist C. E. Moss (1870-1930). Clarke's herbarium is at the Huddersfield Museum. *Naturalist* 1925: 79-83, port.; *Blackwell* (1961): 57; *News Bull. BMS* **25**: 13-20, 1966: 132 (BB: 65).

CLARKE (Louisa Lane (née Lane); ca 1812-1883) married Rev. T. C. Clarke, rector of

Woodeaton, Oxon. She was the author of *The Microscope*, 1858 (edn 2 as *Objects for the Microscope*, 1863, 1870).

COLLARD (Patrick John; 1920-89) medical bacteriologist and Arabist (he translated Avicenna's canons), graduated in medicine from St Bartholomew's Hospital in 1942 and after holding various posts (including that of professor of bacteriology at Ibadan University, Nigeria) was professor of bacteriology and virology at Manchester University, 1964-80. The author of *The Development of Microbiology*, 1976 (Cambridge). *Independent* 15 June 1989; *BMJ* 299: 775, *port.*; 1953.

CONE Mrs **G. B.**, see Stephenson, G. B.

CONNOLD (Edward Thomas; 1862-1910), of Hastings, Kent. Author of *British Vegetable Galls*, 1901, *British Oak Galls*, 1908, and *Plant Galls of Great Britain*, 1909. Cf. **M. T. Masters**, **W. C. Worsdell**. *Nature* 82: 374, 1910; *D*: 145.

COOK W. R. I., see W. R. Ivimey-Cook

COOKE, Mrs **Alice Sophia**, see **A. S. Bacon**.

COOKE (George James; d. 1946), naturalist, agaricologist, was a militant nonconformist minister in charge of Surrey Chapel, Surrey Street, Norwich. He was an active member of the Norfolk & Norwich Naturalists' Society (president in 1937 when his address dealt with Norfolk mycologists - see Cooke, G. J. (1937)). He published lists of Norfolk basidiomycetes (*Trans. Norf. Norw. Nat. Soc.* **14**, **15**, **16**, 1937-40) and bequeathed his coloured drawings of fungi, his copy of M. C. Cooke's *Plates*, his herbarium, and other material to the Norwich Museum; also a legacy to **E. A. Ellis**.

COOKE (Leila Annie; 1882-1977) was the youngest daughter and last surviving child of **M. C. Cooke**. For most of her early adult life she lived in London and kept house for her father whom she sometimes accompanied on fungus forays and so became knowledgeable on agarics. She also attended classes on botany at Birkbeck College. In London she worked as a Post Office telegrapher and after her father's death emigrated to Kenya where she was in turn an agent for ladies underwear, a gold prospector, and a travel agent.

Leila Cooke inherited from her father: '... all the first editions of his books, the poems he had written (as a young man); ... his autobiography, medals from foreign societies and the parchments of his degrees; a volume of original letters from the time of Linnaeus, two unpublished books with original illustrations, two microscopes and about 200 microscope slides, including some done by Sowerby; old daguerrotypes of his father and mother, old photographs of himself taken in his early years, ... (and) his mother's watercolour drawing of plants' (fide English (1987): 2). During the Second World War all this material, was stored in an Army & Navy Stores repository, was destroyed by an incendiary bomb. *Bull. BMS* *12*(1): 80, 1978; *M. P. English, Mordecai Cubitt Cooke, 1987*.

COOKE (Mordecai Cubitt: 1825-1914) was born at Horning, Norfolk, the eldest son of a village shopkeeper of non-conformist stock. He had little formal schooling and was virtually self-educated. After serving a 5-year apprenticeship in the wholesale

drapery business he tried a variety of jobs, married in 1846, and in 1851 he and his wife were appointed as master and mistress of a new National (Church of England) School at Holy Trinity, Lambeth. He found the work congenial and was a somewhat unconventional teacher on Pestalozzian lines. He developed a small school museum and this experience proved useful when after leaving the school in 1860 because of conflict with a new incumbent he was employed in cataloguing economic products from India for the International Exhibition held in London in 1862. This led to a permanent post at the India Museum and in 1880 Cooke was transferred with the botanical section of the Museum to the Royal Botanic Gardens, Kew, where it was agreed that Cooke should work for three days a week as a cryptogamic botanist. Here he stayed until his retirement in 1892.

Cooke's interest in fungi was first aroused by a portfolio of drawings of fungi (now on loan to the Castle Museum, Norwich) belonging to Richard Ward of Salthouse Hall, near Norwich.

Spending his childhood in the country gave Cooke a life-long interest in natural history and affection for Norfolk. He was an expert botanist, an inveterate collector, a keen microscopist, and became an international authority on mycology on which he wrote a number of books and some 300 articles. He initiated the short-lived Society of Amateur Botanists (1863); at his suggestion the publisher **Robert Hardwicke** started *Hardwicke's Science Gossip* (1865-93) with Cooke as editor, was a co-founder of the Quekett Club (which celebrated its centenary in 1965 and still flourishes), and helped to found the British Mycological Society (1896).

Mycologically Cooke owed much to the Rev **M. J. Berkeley** with whom he corresponded from 1862 to Berkeley's death in 1889. He began the journal *Grevillea* (1872-93) (which he edited until 1892 when **G. E. Masee** took over) and his mycological books included: *Rust, Smut, Mildew, and Mould*, 1865 (edn 6, 1897), *Handbook of British Fungi*, 2 vol., 1871 (for which he later issued two series of exsiccati), *Fungi: Their Nature, Influence, and Uses*, 1875, *Micrographia*, 1879 (406 coloured figures of discomycetes), *British Edible Fungi*, 1891, *Handbook of Australian Fungi*, 1891, *Introduction to the Study of Fungi*, 1895, and *Fungoid Pests of Cultivated Plants*, 1906. His most important work, however, is the 8-volume *Illustrations of British Fungi*, 1881-91 (1200 coloured plates of agarics by Cooke, Masee, and others; for attributions see *TBMS* 20: 33-95, 1935).

Cooke was both hardworking and energetic and did much to popularize the study of fungi. He regularly took part in forays of the Woolhope Club, the Yorkshire Naturalists, and the Essex Field Club. He was an able artist and a versifier. His herbarium of 46,000 specimens is now at Kew together with his collection of drawings (ca 22,000, 6,000 by Cooke). He received many honours but was never one of the establishment and died in obscurity at Southsea. See also **M. J. Berkeley, A. Clarke, Leila A. Cooke, W. L. W. Eyre, J. T. Quekett, D. Stock, E. W. Swanton**. *TBMS* 5: 169-85, 1915; *M. P. English, Mordecai Cubitt*

Cooke, 357 pp., 1987 (Bristol); *Microscopy* 33: 339-48, 1978 (*Cooke's microscope*); *SC I*. 536; *D*: 146 (*BB*: 72).

COOPER, Mrs Astley, See Rea, V.

COOPER (Charlotte Angela; 1871-1944), mycologist (agaricologist), of Robin Hood's Bay, Yorks., was a member of the Yorkshire Naturalists' Union (and of its Mycological Committee) and a founder member of the Whitby Naturalists' Union. After moving south she became an active member of the Hertfordshire Natural History Society and the BMS. *Blackwell* (1961): 62; *D*: 147.

COOPER (Edgar Franklin; 1833-1916), amateur botanist, was a Leicester banker, see **F. T. Mott**. *D*: 148.

COOPER (W.), see **F. T. Mott**.

COPE (Sir Vincent Zachary; 1881-74), surgeon to St Mary's Hospital, London, monographed actinomycosis (*Actinomycosis*, 1938) and supplemented this with an account in verse: *What the General Practitioner Ought to Know About Actinomycosis*, 1952. *DNB* (1971-80): 178; *BMJ* 1975 1: 198-9, port.; *Lancet* 1975 1: 115, port.; Ainsworth & Stockdale (1984): 4.

CORBETT (Wilfred; 1902-71). Trained as a Kew gardener (1923-5), he held posts at the Experimental & Research Station, Cheshunt (1925-31; assistant to **W. F. Bewley**), as Kent Advisory Officer on market gardening, and was then in charge of the County Demonstration Glasshouse Station, and finally, in 1946, principal of the Kent Horticultural Institute, Swanley. *D*: 149.

COTTON (Arthur Disbrowe; 1879-1962), plant pathologist, mycologist, and botanist, was born in London, attended King's College School, and began a horticultural career before graduating from the Royal College of Science. During 1901 he was demonstrator at Owen's College, Manchester, where he came under the influence of **O. V. Darbishire** and did some work on orchid mycorrhiza.

From 1904-15 he worked at the Royal Botanic Gardens, Kew, under **G. E. Massee** and then took charge of the newly established Plant Pathology Laboratory at Kew (at 17 Kew Green, the future home of the Imperial Bureau of Mycology under **E. J. Butler**) with money resulting from the Development Fund Act of 1909. In 1918 the research aspects of this laboratory were transferred, under **W. B. Brierley**, to Rothamsted Experimental Station. The administrative and advisory side, which remained at Kew, was transferred to the Board of Agriculture with Cotton as the first mycologist to the Board. In 1920-1 this laboratory was moved to Harpenden to become the Ministry of Agriculture's Plant Pathology Laboratory. Cotton moved with the laboratory but returned to Kew in 1922 as keeper of the herbarium and library, a post he retained until his retirement in 1946.

Figure 9. Arthur Disbrowe Cotton (1879-1962)

Cotton published on a diversity of plant pathological and mycological topics (especially notable was his study (with **E. M. Wakefield**) of the

Clavariaceae, see *TBMS* **6**, 1919) - and also on algae - and in 1913 he became president of the British Mycological Society at the early age of 34. In 1919 he was responsible for establishing the BMS Plant Pathology Committee (chairman, **F. T. Brooks**; secretary, Cotton) which decided to arrange phytopathological excursions (see **W. Buddin**) and to prepare a list of common names of British plant diseases. In the absence of a British society for plant pathology the Plant Pathology Committee, during the late nineteen-twenties to early thirties, became the most active section of the BMS.

Cotton was awarded the OBE (1934), the Veitch Memorial Medal by the Royal Horticultural Society (1943), and was president of the Linnean Society for 1942-46. *TBMS* **47**: 142-3, *port.*, 1964; *Nature* **197**: 951, 1963; *Taxon* **12**: 129-37, *port.*, *bibl.*, 1963; *D*: 151

COX (Arthur Ernest; 1925-79), advisory agriculturalist, was the co-author with **E. C. Large** of 'Potato Blight Epidemics' *Agric. Handb. USDA* **174**, 1960). Educated at Bristol Grammar School and Reading University, after a period in Edinburgh Cox became district agricultural adviser in the National Agricultural Advisory Service at Colchester where he developed an interest in the potato. After working with Large he was posted to Somerset, and then to the ADAS Centre at Starcross, Devon, as agronomist. He wrote *The Potato - a Practical Scientific Guide*, 1967. His early death, by suicide, was a tragedy. *FBPP News* **4**: 69, 1980.

CRABBE (Rev. George; 1754-1832), LLD (Cantab., 1784), *b.* Aldeburgh, Suffolk, where he was apprenticed in turn to two local apothecaries. For a time practised in Aldeburgh, then took Orders in the Church of England and was curate at Aldeburgh, held a chaplaincy at Belvoir, Leicestershire, and finally became rector of Trowbridge, Wilts., where he died. Crabbe was an able and percipient botanist and naturalist, as his poetry shows. In 1795 he published a paper on the fauna, flora and fossils of the Vale of Belvoir in J. Nichols, *The History and Antiquities of the County of Leicester* which was 'simply an enumeration of plants - especially fungi - insects and petrifications' (fide R. Huchon, *George Crabbe and his Times*, 1907 (reprint, 1968): 204). *DNB* **I**: 1353-6; *D*: 155 (*BB*: 75).

CRABTREE (John Henry; 1863-1924), photographer (FRPS), who worked as a schoolmaster in Wardle and as a factory inspector, wrote, and illustrated with his own photographs, various books including several volumes in the 'How to Identify' series published by Charles H. Kelly, London. No 8 in the series was *British Fungi and How to Identify Them*, (1916). *D*: 155.

CRAN (William; 1854-1933), MA (Aberdeen), BD (Edinb.,) *b.* Lesmoir, Aberdeenshire, was lecturer at the Wesleyan Seminary, Antigua (where he collected myxomycetes) and returned to Scotland in 1898 to become Congregational minister at West Hill, Skene, Aberdeen. He was a friend of **G. Lister**. *J. Bot.* 1938: 319-27 (which lists his myxomycete finds in Aberdeenshire and Kincardine). *D*: 156.

CRAWSHAY (Richard; *fl.* 1920s-1930s) was the author of *Spore Ornamentation of Russula*, 1930, which includes a key to species.

- CRESSWELL** (Rev. Richard; 1815-82), BA (Oxon., 1839), curate of Salcombe Regis and Teignmouth, Devon, studied fungi. His plants and drawings are at Exeter Museum; his letters at **BM**. *D: 157 (BB: 75)*.
- CROALL** (Alexander; 1809-85), b. Brechin, Angus; d. Stirling, was curator of the Smith Institute, Stirling (1873) and issued *Plants of Braemar*, (4 fasc., 602 spp), 1857. *D: 158 (BB: 76)*.
- CROMBIE** (Rev. James Morrison; 1830-1906), lichenologist, was born at Aberdeen. He graduated MA from Edinburgh University and was ordained a minister of the Established Church of Scotland in 1862, and elected FLS in 1868. From 1879-91 he lectured in botany at St Mary's Hospital Medical School in London. In 1870 Crombie issued *Lichenes Britannici Exsiccati* and made more than 50 published contributions on British lichens between 1861 and 1901 including accounts of the lichens of Epping Forest, Middlesex, and Norfolk (the last to the *Victoria History of the Counties of England*, 1901). He also published on foreign lichens sent to the British Museum for identification. His major publication was Part 1 of *A Monograph of Lichens Found in Britain ...*, 1894, - written for the British Museum - Part 2 of which was subsequently completed and published in 1911 by **Annie Loraine Smith**. *Proc. LS 1905-6: 36-7; Hawksworth & Seaward (1977): 21-3, 67-9 (bibl.), 209; D: 158 (BB: 76)*.
- CROPLEY** (Roy; 1928-80), plant pathologist, after study at Reading University and the Royal Botanic Gardens, Kew, he became plantation assistant at East Malling Research Station where, gaining his NDH, he assisted A. F. Posnette with researches on virus diseases and became an international authority on virus diseases of fruit trees. He gained a PhD (Reading) in 1967 and was appointed assistant to the director in 1974. *FBPP Newsletter 6: 48, 1980*.
- CROSSLAND** (Charles; 1844-1916), Yorkshire naturalist, was a butcher by trade and from 1873 had a shop in Halifax. At first interested in flowering plants he attended meetings of the Yorkshire Naturalists' Union (of which, in 1907, he became president) where **G. E. Masee** introduced him to the study of fungi which he took up with enthusiasm. His first mycological paper ('Fungi new to Yorks.') was published in 1890 and he contributed the cryptogamic section to Crum & Crossland's *The Flora of the Parish of Halifax*, 1904. His main work, compiled with Masee, was *The Fungus-flora of Yorkshire ...*, 1902-5. (His drawings are at Kew (boxes 170, 171). When the YNU Mycological Committee was formed in 1892, Crossland was the first secretary. He was also a Foundation member of the British Mycological Society (see **A. Clarke**). See also **J. Bolton**, **W. A. Thwaites**. *TBMS 5: 466-9, 1917; Blackwell (1961): 57; D: 159 (BB: 71)*.
- CROTCH** (Rev. William Robert; 1799-1877), MA (Oxon), was born in Oxford. He became a master at Taunton Grammar School, Somerset, in 1854 and was subsequently (1872) vicar of Catherington, Hants, where he died. In 185 he published a list of the fungi of Somerset (*Proc. Somerset Archaeol. Soc. 5: 132-56*). *D: 160 (BB: 77)*.
- CROWE** (James; 1750-1807), FLS (1788), naturalist with mycological interests, was a

surgeon by profession and a wealthy landowner with estates at Lakenham, Norwich (where he lived), and in west Norfolk. He was a friend of **J. E. Smith** and sponsored John Lindley (1794-1865) who in 1838 prepared a report on the Royal Gardens at Kew which led to the establishment of the Royal Botanic Gardens there. *D: 160 (BB: 77)*.

CROXALL (Harold Eli; 1914-86), plant pathologist, after graduating at Birmingham University with first class honours in 1936 was appointed a Teaching Scholar and began his studies for a PhD. In 1938 he was appointed assistant advisory mycologist at Long Ashton Research Station and began his life's work in plant pathology. In 1940, when the National Agricultural Advisory Service was established, Croxall was given charge of the Field Station at Evesham. His next postings were as regional plant pathologist in charge of the Northern Region (1950-4) and the West Midlands (1954-66). He then held a series of higher offices; deputy director, East Midlands Region (1966-9), regional director Lancashire and Yorkshire Area (1969-70), regional officer in the Midlands of the Agricultural Development and Advisory Service (ADAS), stationed at Shardlow, nr. Derby (1970-2), where he became regional manager (1972-4). He was an experienced advisory plant pathologist and published some 30 papers and, after retirement, (and with A. L. Smith), *The Fight for Food - Factors Limiting Production*, 1984. President of the British Mycological Society for 1966, his presidential address was entitled 'The role of the advisory plant pathologist'. He was a keen gardener. *TBMS 88: 147-8, port., 1987*.

CRUICKSHANK (Charles Nigel Dallas; 1919-87), medical pathologist (MB (St Andrews, 1942), MD (Birmingham, 1949), FRCPath, after service with the Royal Air Force in 1946 joined the Medical Research Council's Industrial Accident and Burns Unit, moving (1952) to the new MRC Unit for Experimental Pathology of the Skin at Birmingham of which he became the director (1962-79). He investigated the proteases of dermatophytes and the immunity of ringworm. A founder member of the British Society for Mycopathology, Cruickshank served as the Society's first secretary. *BMJ 294: 1105, 1987; Brit. Soc. Mycopath. Newsletter, Summer 1987: 2*.

CRUMP (William Bunting; 1868-1950), MA (Oxon.), b. Scarborough, Yorks., was science master at Heath Grammar School (to 1914), then cinema owner at Brighouse. See **C. Crossland**. *Naturalist 1950: 68-70, port.; D: 162*.

CULPEPPER (Nicholas; 1616-54), London physician, astrologer, and herbalist, included the lichen lungwort (*Lobaria pulmonaria*) in *The English Physitian ...*, 1652 (for its many later editions and issues, see B. Henrey, *British Botanical and Horticultural Literature Before 1800*, 1: 236-42, 1975). Most herbalists since have followed Culpepper's lead. *DNB I: 483; D: 163 (BB: 78)*.

CUNNINGHAM (David Douglas; 1843-1914), MD (Edinb., 1867), FLS (1876), FRS (1889), was pathologist in the Bengal Medical Service, 1868-71, then professor of physiology at Calcutta Medical College until 1898. Like a number of other members of the Indian Medical Service Cunningham took an interest in the local

natural history, particularly rusts, and he was the first to describe red rust of tea caused by the alga *Mycoidea parasitica* Cunningham (1879) (*Cephaleuros virescens*). After retirement to England he became honorary physician to the King. *Proc. RS B82*: iv-vi, 1916; *BMJ 1915 1*: 98; *WWW (1897-1915)*: 127; *SC 1*: 572; *D*: 164 (*BB*: 79).

CURREY (Frederick; 1819-81), FRS (1858), FLS (1860), mycologist and botanist, was the son of Benjamin Currey, Clerk of the Parliaments. He was educated at Eton and Cambridge (Trinity College) and graduated in 1841 (MA, 1844). Called to the bar, he practised as conveyancer and equity draughtsman. He had wide interests in natural history, translated several German textbooks (including H. Schacht's *Das Mikroskop*, 1853, was one of the first members of the Greenwich Natural History Club founded in 1852, and became the first botanical secretary of the Linnean Society of London (1860-80). Mycology was his chief speciality. He published 'Fungi of the Neighbourhood of Greenwich' *Phytologist 5*: 121,144, 1853) (later listing 395 fungi of that district) and a number of other mycological papers including the development of '*Sclerotium roseum*' (*Sclerotinia curreyana*) on *Juncus* (*J. Linn. Soc. Bot. 1* and the description of fungi collected by Dr F Welwich in Angola. It was Currey who edited the 2nd edition (1863) of **C. D. Badham's** *Treatise of the Esculent Fungusses*. His manuscripts on fungi are at the Linnean Society, his fungi at Kew, and letters at the BM. *Nature 24*: 485-6, 1881; *Proc. LS 1881-2*: 59-60; *SC 1*: 573; *D*: 166 (*BB*: 80).

CURRIE (J. F.; 1895/6-1945). During 1922-7 he was employed by the Scottish Board of Agriculture and became senior potato inspector. In 1928 he was appointed technical supervisor of the newly established scheme for seed potato production in North Wales.

CURTIS (Kathleen Maisey) BA, MA(New Zealand), DIC (1917), DSc (1921), FLS (1919), graduated in New Zealand and is remembered for her study in the UK of the life history of *Synchytrium endobioticum* (*Phil.Trans. B 210*: 409-78,5 pl., 1921).

CURTIS (William; 1746-99), FLS (1788), (b. Alton, Hants; d. Brompton, London), apothecary and botanist, is most famous for the *Botanical Magazine: or Flower-Garden Displayed* he founded in 1787 and which is continued today by the Royal Botanic Gardens, Kew. The two folio volumes of his lavish *Flora Londonensis*, 1775-98, include coloured plates of a number of larger fungi. See also **J. Banks**. *DNB 1*: 488; *W. H. Curtis, William Curtis, 1746-1799, 1941*; *SC 1*: 575; *D*: 167 (*BB*: 81).

D

DADE (Harry Arthur; 1895-1978) was born at Greenwich, served in the Royal Artillery during the First World War, wounded during the battle of the Somme (1916), and achieved the Field rank of Major, a title retained for the rest of his life and well

suited to his rather military appearance. After graduating from the Royal College of Science Dade worked for the Colonial Service as mycologist (plant pathologist) in the Gold Coast (Ghana) from 1921 until 1935 (where he collaborated with **R. H. Bunting**) when he was appointed to the Imperial Mycological Institute, Kew, of which he became Assistant Director in 1940. Early in the Second World War Dade volunteered for military service but on being graded unfit for overseas service he returned to Kew and took charge of the local Home Guard. Dade's sound knowledge of tropical plant pathology was valuable to the Institute but his major contribution was the establishment of a culture collection based on the bequest of cultures from the National Collection of Type Cultures in 1947 (see **R. T. St John-Brooks**, M. Rhodes).

Dade was most versatile. An expert draughtsman, competent watercolourist, and clever cartoonist, he was a skilful manipulator of wood and metal. He kept bees (in 1960 produced a beautifully illustrated book - *The Anatomy and Dissection of the Honey Bee*) and with Joan Gunnell wrote *Classwork with Fungi*, 1966 (edn 2, 1969). He was an active member of the Quekett Club (President, 1955-58) and a mine of general information. After retirement he emigrated to Australia (where his only son was in medical practice) and took up the study of coprophilous fungi. See also **S. F. Ashby**. *CP News* 6 (4): 63, 1960; *Bull. BMS* 13: 74-5, 1979.

DALE (Samuel; 1659-1739), the author of *Pharmacologia, seu Manuductio ad Materiam Medicam*, 1693 (edn 3, 1737), practised as a physician and apothecary at Braintree, Essex, and supplied botanical material (including fungi) and information to **John Ray**. *DNB* 1: 491; *Ramsbottom* (1932): 170-5; *SC* 1: 590; *D*: 169 (*BB*: 82).

DALLINGER (Rev. William Henry; 1842-1909), DSc (Dublin, 1852), FRS (1880), FLS (1882), Wesleyan Methodist minister (president of Wesley College, Sheffield, 1880-8) and microscopist was president of the Quekett Club (1890-2) and of the Royal Microscopical Society (1884-7). He edited and rewrote **W. B. Carpenter's** *Microscope and its Revelations*, 1901. Dallinger died at Lee, Kent. *DNB* 2: 2591; *Proc. LS* 1909-10: 87-9; *D*: 170 (*BB*: 59).

DALTON (Rev. James; 1764-1843), FLS (1803), rector of Croft, Yorks. (1805-43), contributed lichens to *English Botany* (see **J. Sowerby**, the elder). Cf. **F. A. Lees**. *Seaward* (1987): 39,40; *D*: 170 (*BB*: 82).

DAMPIER (William; 1651-1715), naval captain, pirate, etc., when voyaging round the world visited the Phillipines in 1686 where he observed 'tinea concentrica' (as a 'sort of Leprosie') although it was not until a hundred years later that the causal dermatophyte (*Trichophyton concentricum*) of this tropical ringworm was described and named. See also **P. Manson**. *DNB* 1: 497; *SC* 1: 594; *D*: 171 (*BB*: 83).

DANDRIDGE (Joseph; 1665-1746), entomologist and naturalist of Moorefields, was a 'pattern drawer' for silks (some of his designs are in the Victoria & Albert Museum). His collections were many and varied and included some lichens. He

made drawings of more than a hundred kinds of fungi and his friends included **W. Sherard** and **J. J. Dillenius**. *D. E. Allen, The Naturalist in Britain, 1976: 14-15; D: 171.*

DARBYSHIRE (Otto Vernon; 1870-1934), botanist (and lichenologist), was born at Conway, Caernarvonshire, and was educated at Dresden, Florence, Bangor, and Kiel, and graduated from Oxford. He was successively lecturer in botany at Kiel University (1897; where he gained a PhD), Manchester University (1898-1909), Armstrong College, Newcastle-on-Tyne (1909-11), and then Bristol University where he became the first Melville Wills Professor of Botany (1919-34). During the First World War Darbyshire commanded the Bristol University OTC and arranged for the growing and distribution of the seeds of several kinds of medicinal plants for the Board of Agriculture. His main research interests were in cryptogams (especially lichens (see Hawksworth & Seaward (1977): 25;71,bibl.), and marine algae, ecology, and physiology. Darbyshire was elected FLS in 1920 and was president of the British Mycological Society (1923) and of the Bristol Naturalists' Society (1932-4). He was fond of music and his recreation slate quarrying. *Nature 134: 726, 1934; Proc. LS 1934-5: 171-2; SC 1: 597; D: 172.*

DARNELL-SMITH (George Percy; 1868-1942), b. Chipping Norton, Oxon., emigrated to Australia to become microbiologist at the New South Wales Bureau of Microbiology, where he studied diverse plant diseases (1909-13) and subsequently was director of the Botanic Gardens, Sydney (1924-33). *Butler (1929): 4; D: 172.*

DARWIN (Charles Robert; 1809-82), naturalist, grandson of **Erasmus Darwin**, author of *The Origin of Species*, 1859 and numerous other works. Darwin had no special interest in fungi but mycological specimens he collected while voyaging round the world on *The Beagle* (1831-36) were subsequently identified by **M. J. Berkeley**. Among these was *Cyttaria darwinii* Berk. which Darwin found to be an important item in the diet of the natives of Tierra del Fuego. See **J. Henslow**. The literature on Darwin and Darwinism is voluminous. Starting points include: *DNB 1: 503; DSB 3: 565-77; SC 1: 600; D: 173 (BB: 84); The Correspondence of Charles Darwin, 1 (1985), Cambridge University Press; A. Desmond & J. Moore, Darwin, 1991.*

DARWIN (Erasmus; 1731-1802), grandfather of **C. R. Darwin**, was a successful physician at Litchfield and, according to Coleridge, the most widely-informed and original man in Europe. He had wide interests and was a member of the Lunar Club which met once a month on the Monday nearest the full moon to discuss scientific and related topics. Erasmus Darwin is well known for *The Botanic Garden*, 1791, an account in verse of the plant kingdom and the Linnean classification of plants in particular. Fungi were not emphasized but from Part 1 (The Economy of Vegetation: 202-3) it is clear that Darwin had a good general idea of the range of diseases affecting plants; a topic he returned to in more detail, and in prose, in *Phytologia*, Sect. 4 1800. He also observed fairy rings which he attributed to lightning strikes. Erasmus Darwin recognized the role of P and N in

fertilizers and advocated the construction of sewage farms to conserve nutrients. He contributed the botany to J. Pilkington, *View of the Present State of Derbyshire*, 2 vols., 1789 (edn 2, 1803). *DNB I*: 504; *DSB 3*: 577-81; *H. Pearson, Doctor Darwin, 1930*; *D. King-Hele Erasmus Darwin, 1963*; *D*: 173 (*BB*: 84).

DAVIDSON (William Dodds; 1887-1939), agricultural inspector (plant pathologist), born in Co. Mayo, was a student at the Albert Agricultural College and then the Royal College of Science, Dublin, where he gained a diploma and while at the College, in 1907, graduated from the old Royal University of Ireland. From 1908-17 he was instructor in agriculture in Co. Down, then Officer in Charge of Black Scab (wart disease, *Synchytrium endobioticum*) Operation and also in charge of Inspection under the Potatoes (Export from Ireland) order, and finally an Agricultural Inspector of the Department of Agriculture. He became a leading expert on potatoes. One of his concerns was to ensure that only varieties immune to wart disease were grown in scheduled areas. He realized the importance of viruses (especially that of leaf roll) in potato degeneration and was able to rejuvenate the blight-resistant variety Champion from virus-free nuclear stocks which was the first occasion in which a 'run out' variety had been restored to vigour. *McKay (1951)*: 22-6, *port.*, 27 (*bibl.*); *Muskett (1976)*: 407.

DAVIES (D. Walters; 1893-1955), plant pathologist, qualified for membership of the Royal Institute of Chartered Auctioneers and after the First World War, in which he was an Army captain, graduated from the University College of Wales, Aberystwyth. From 1920-1946 he was advisory mycologist at the Welsh Plant Breeding Station, Aberystwyth, then (1946-9) Deputy Provincial Director of the National Agricultural Service (Wales), and finally (1949-55) Provincial Director. His main interest was in virus diseases of potato and cereal diseases. He undertook an investigation of wheat bunt with **K. Sampson**. *Cambrian News 26 August 1955*.

DAVIES (Rev. Hugh; 1739-1821), botanist, graduated from Cambridge (Peterhouse) and became rector of Aber, Caernarvonshire. He paid particular attention to the lichens of Anglesey (*Welsh Botany*, *I. Systematic Catalogue of the Native Plants of the Isle of Anglesey*, 1813). *DNB I*: 508; *Hawksworth & Seaward (1977)*: 10, 72; *D*: 176 (*BB*: 85).

DAY (E. Metcalfe; 1865-1934), amateur mycologist of Minchampton, Glos., was interested in agarics and a correspondent of **C. Rea** (see **T. E. T. Bond**, *Bull. BMS 11*: 81-120, 1977). His fungi are at **K**; his drawings at **BM**. *Proc. Cottesmore Nat. Club 25*: 191-8, 1935; *D*: 178.

DAY (William Robert; 1893-1966) graduated in forestry at Oxford University and in 1925 became the first lecturer in forest pathology at the newly established Imperial Institute of Forestry, Oxford, where he spent his working life. In 1924 Day was the first to describe the bacterial pathogen *Bacterium salicis* Day (*Erwinia salicis*) causing watermark disease of cricketbat willow (*Oxford Forest Mem. 3*) and subsequently studied and published on a diversity of tree diseases, particularly those caused by *Fomes annosus* (*Heterobasidion annosum*),

Armillaria mellea, and *Dasyscypha (Lachnellula) wilkommii* on conifers, doing most of this work on Forestry Commission plantations. Day was awarded the Gold Medals of the Royal Forestry Society of England, Wales, and Northern Ireland and (posthumously) of the Society of Foresters of Great Britain, and served a term (1941-4) on the Plant Pathology Committee of the British Mycological Society. He died as the result of a motor accident. See **T. R. Peace**. *Bull. BMS* 1 (1): 40, 1967.

DEAKIN (Richard; 1808-9-73), MD (Pisa), lichenologist and botanist, practised in Sheffield when he contributed to **D. Turner & W. Borrer**, *Specimen of Lichenographica Britannici*, 1839. He encouraged **J. Bohler** to study lichens. *Hawksworth & Seaward (1877)*: 12; *SC 2 I*: 603; *D*: 179 (*BB*: 87).

DE CRESPIGNY (Eyre Champion; 1821-95), was born at Vévéry, Switzerland, educated at St Paul's School, London, and at Heidelberg. Qualified in medicine at St Bartholomew's and Guy's Hospitals in London and was in 1845 appointed to a post in India for military, naval, and civil medical duties. Returning to England (due to ill health) in 1862 he took up botany and his *New London Flora*, 1877, lists fungi. *D*: 180 (*BB*: 87).

DEERING (George Charles; ca 1695-1749) was born in Saxony and educated at Hamburg and Leyden, qualifying in medicine in 1713. He first came to England in 1713 where he married and after a period on the continent returned to England and lived in London and, from 1736, Nottingham. His *Catalogue of Plants Naturally Growing ... about Nottingham*, 1738, included lichens. He was helped in his botanical studies by **J. J. Dillenius**. *DNB I*: 520; *D*: 180 (*BB*: 88).

DEIGHTON (Frederick Claude; 1902-92), MA, DSc, FLS (1949), OBE (1955), graduated from Cambridge University and in 1926 joined the Colonial Office as mycologist (plant pathologist) in Sierra Leone where he worked until 1955 when he served as a mycologist at IMI (editing the *Index of Fungi* for a number of years) until his official retirement in 1973 subsequent to which he was a regular visitor to the Institute. In Sierra Leone he made extensive collections of fungi (6,600+ specimens, now at **IMI**), and also flowering plants (now at **K**) and compiled a list of the fungi of that country. He contributed some 17 titles to *Mycological Papers* (with emphasis on *Cercospora* on which he became expert) and his collections are the basis of hundreds of new species. *Intercom (IMI)* 62: 1-2, 1992; *Mycologist* 6: 153, 1992.

DEWHIRST (John; 1746-1815), assistant to **J. Bolton**, died at Halifax, Yorks. *D*: 183.

DICK (William; 1793-1886), *b.* Edinburgh, the son of a farrier, was a prominent Scottish veterinarian during the first half of the nineteenth century. He founded (and was the owner of) the Edinburgh Veterinary School in 1823 which for a time after 1844 was a school of the Royal College of Veterinary Surgeons but later broke away and Dick, on his death bequeathed the school to the City of Edinburgh. At the beginning of the twentieth century the City arranged for the school to become the veterinary department of Edinburgh University and in 1904 it was transferred to Liverpool as the University's Veterinary Department, headed by Rubert Boyce,

FRS. *Pattison (1983): 13, 102(port.)*.

DICKIE (George; 1812-82), born (and died) in Aberdeen, became lecturer in botany at King's College there, then professor of natural history at the new University of Belfast (1849), and finally professor of botany at Aberdeen University (1860). Best known as an algologist, in his *The Botanist's Guide to the Counties of Aberdeen, Banff and Kincardine*, 1860, the 200 species of fungi are arranged according to **Berkeley's English Flora, 1836. *Ramsbottom (1963): 171; SC I: 643; D: 183 (BB: 90)*.**

DICKSON (Mrs Carola B.; ca 1850-ca 1920). Her husband was precentor at Ely Cathedral for 50 years. In Sept. 1915 (when widowed and living at Bournemouth) she presented 480 watercolour drawings of larger fungi, 1877-95, to Kew (filing boxes 176, 177, 178).

DICKSON (Robert; 1804-75), MD (1836, Edinb.), FLS, a London physician, was the author of *A Lecture on the Dry Rot, and the Most Effectual Means of Preventing it ...*, 1837, 1838. Cf. **G. Birkbeck, W. Chapman, M. Faraday, J. Knowles**. *DNB I: 538; D: 185 (BB: 91)*.

DILLENIUS (Johann Jakob; 1684-1747) was born in Darmstadt and qualified for medicine in Germany where in 1719 he published *Catalogus Plantarum Sponte Circa Gissam Nascentium* in which new ground is broken by classifying larger fungi into two primary groups - stipitate-piliate forms and those lacking a pileus (see Ainsworth (1976): 247 for some further details). In 1721 **William Sherard** brought Dillenius to England to help with Sherard's intended index of plants but Dillenius's major contribution to British mycology was his production of the 3rd edition (1724) of **John Ray's Synopsis Methodica Stirpium Britannicarum** in which he updated the mycology and increased the list of fungi recorded for Britain from under 100 to 161 (but because Dillenius was a foreigner it was considered undesirable that his name should appear on the title-page). Dillenius also made a major contribution to lichenology by his *History Muscorum* of 1742 which included some 120 lichens, mostly British, and the fine plates are from drawings by Dillenius himself. (The original drawings are now at the Natural History Museum and the specimens from which the drawings were made at Oxford).

On the death of William Sherard in 1728, Dillenius became the first Sherardian Professor of Botany at the University of Oxford and he was commissioned by **James Sherard** (William Sherard's brother) to write *Hortus Elthamensis*, 2 vol., 1732, an account of the plants in James' garden at Eltham, Middlesex. See also **S. Brewer, J. Dandridge, G. C. Deer**. *DNB I: 541; DSB 2: 98-9; SC I: 655; G. C. Druce & S. H. Vines (Ed.), The Dillenian herbaria (at Oxford), 1907; D: 186 (BB: 91)*.

DILLON-WESTON (William Alistair Royal; 1899-1953), plant pathologist, was born at Newport, Mon., attended Bristol Grammar School (1907-17) and graduated from Cambridge (St Catherine's College) in 1922, having spent 1918-9 in the army.

From 1922-46 he was advisorintercomy mycologist at the School of

Agriculture, Cambridge, and in 1946 became provincial plant pathologist to the Eastern Province of the National Agricultural Advisory Service based at Trumpington Hall, Cambridge.

He was a wide ranging investigator and publicist (the author of *ca* 100 articles). At first worked on diseases of fruit trees, then rusts and smuts of cereals (and spent 1930-1 with J. H. Craigie at Winnipeg), but some of his most important investigations were on the fungicidal action of mercury compounds. Dillon-Weston was, in the words of W. C. Moore, 'a sensitive artist, full of stimulating and occasionally unusual ideas, kindly disposed to others ... Yet his restless impetuosity ... together with a tendency to brook no interference in his affairs, at times induced exasperation ... among those who ... admired him most'. His accomplishments were varied. As an airman he studied the fungus flora of the upper air; as an expert glass-blower he made a series of models of microfungi; and as an artist illustrated disease in plants and designed posters. With R. E. Taylor, he wrote *The Plant in Health and Disease*, 1948. *Nature* **172**: 480, 1953 (*W. C. Moore*); *D*: 187.

DILLWYN (Lewis Weston; 1778-1855), naturalist of Swansea. See **D. Turner**. *DNB I*: 542; *D*: 187 (*BB*: 92).

DIXON (George; 1812-1904) was superintendent of the North of England Agricultural College, Yorks.; (later at Great Ayton School), and promoted natural history in other Quaker schools. He encouraged **W. Mudd** to study lichens and wrote *Handbook to the Herbarium*, 1845, and the herbarium labels produced for this work were used by **Mudd**. *Seaward* (1987): 41-2, *port*.

DIXON (Henry Horatio; 1869-1953), BSc (Dublin, 1892), FRS (1908), FLS (1925), became professor of botany at Trinity College, Dublin (1904-50), and director of the Trinity College Botanic Garden (1906-21). Dixon's botanical research was mainly physiological but he had subsidiary mycological interests (see Muskett (1976) 435 (240, 242)). He was president of Section K (Botany) of the British Association for 1922. *DNB 2*: 2603; *D*: 188.

DIXON (Hugh Neville; 1861-1944), headmaster, School for the Deaf, Northampton 1844-1914, contributed lichens of Northamptonshire to the *Victoria History of the Counties of England* 1902. *SC I*: 660; *D*: 188.

DODD (Alfred John; 1882-1963), amateur mycologist and botanist of Taunton, Somerset, compiled mycological records for his county, was a regular attender at British Mycological Society forays, and acted as local secretary for the Autumn Foray of 1960. He also served on the Council of the Natural History Section of the Somerset Archaeological Society. *News Bull. BMS* **22**: 13, 1964.

DON (George; 1764-1814), botanist, was a clock-maker and for a time curate of the Botanic Garden, Edinburgh. He listed the lichens of Angus (1813) issued *Herbarium Britannicum*, 9 fasc., 1-125, 1804-12 (which included lichens and 8 species of fungi in **W. Gardiner's** *Flora of Forfarshire*, 1848, are credited to him. *DNB I*: 552; *Hawksworth & Seaward* (1977): 14, 15, 74; *D*: 190 (*BB*: 93).

DOODY (Samuel; 1656-1706), FRS (1695), apothecary and curator of the Chelsea

Physic Garden, 1692-1706. His lichen specimens are in the Sloane Museum (Hawksworth & Seaward (1977): 5). He contributed lichens and other cryptogams to **J. Ray**, *Synopsis Methodica Stirpium Britannicarum*, 1660 (edn 3, 1704) and made the first British find of *Myriostoma coliforme* (in Kent, Sept 16 as 'Fungus pulverulentus, coli instar perforatus, cum volva stellata' (see Ray, *Synopsis* (edn 2); 340, 1696). *DNB I*: 554; *D*: 191 (*BB*: 93).

DOWNIE (Dorothy; d. 1961) was born in Edinburgh and graduated at Edinburgh University in science (1917) and forestry (1919). Trained as a teacher, she then went to Aberdeen University as an assistant in the botany department to which, after three years in the United States, she returned to become lecturer and then reader in botany. After an interest in cycads she made a study of orchid mycorrhiza, especially of native species including *Orchis purpurella*, *Goodyera repens* (*Trans. Bot. Soc. Edinb.* **33**, 1943) and *Listera ovata* (*ibid.* **35**, 1949). *News Bull. BMS* 17: 1, 1962.

Figure 10. Walter John Dowson (1887-1963)

DOWSON (Walter John; 1887-1963), after schooling at Dulwich and Oundle, graduated from Cambridge (Christ's College) and gained a wide and varied experience in plant pathology as Government Mycologist in Kenya (then the East African Protectorate), 1913-20, at the Wisley Laboratory of the Royal Horticultural Society, 1920-28, and Tasmania, 1928-32. Next he was appointed by **F. T. Brooks** at the Botany School, Cambridge, to develop teaching and research on bacterial diseases of plants of which he made a success. In 1939 Dowson

differentiated the genus *Xanthomonas* (which includes so many important plant pathogens) from *Pseudomonas* and published *Manual of Bacterial Plant Diseases*, 1949 (later replaced by *Plant Diseases Due to Bacteria*, 1957) which became a standard text. At his retirement in 1952 Dowson was Director of the Sub-Department of Mycology and Plant Pathology. *Times* 24 Sept. 1963; *Nature*; **200**: 630-1, 1963; *Ann Rev. Phytopath.* **19**: 29-34, port., bibl., 1981.

DRING (Donald Malcolm; 1932-78) gained an External London degree as a student of the University College of the South West and subsequently a PhD of the University of Exeter.

Dring spent 1956-60 as plant pathologist in Ghana and then worked for a

Figure 11. Donald Malcolm Dring (1932-78)

year for FAO in the Cameroons. On return to England he was awarded a Senior Research Fellowship to study his collections of West African fungi at the Royal Botanic Gardens, Kew, where in 1965 he was appointed to the permanent Herbarium staff, specialising in Gasteromycetes, especially Phallales. He also helped supervise the Kew quarantine scheme. His monograph on the Clathraceae was published posthumously in 1980 (*Kew Bull.* **35**:1). *Times* 1 Aug. 1978; *Kew Bull.* **34**: 205-9, port., 1979.

DRUCE (George Claridge; 1850-1932, MA (Oxon.,1899), FLS (1879), FRS (1927), botanist, was an Oxford pharmacist. He listed fungi (which were contributed by **S. C. Beck** and lichens of Oxfordshire in his *The Flora of Oxfordshire*, 1886, and of Berkshire in the *Victoria History of the Counties of England*, 1906. *DNB* 1: 2607;

D: 195.

DRUERY J. H., See **D. Turner**.

DUDDINGTON (Charles Lionel; 1906-73), MA, PhD, FLS, mycologist, was in charge of the biology at the Regent Street Polytechnic, 1946-70. His main interest was in nematode-attacking fungi; see *Friendly Fungi*, 1956 (predacious fungi), reviews *Bot. Rev.* **21**, 1955, *Biol. Rev.* **31**, 1956, also *TBMS* **32-34**, **38**, **42**. Duddington was also the author of *Micro-organisms and Their Allies*, 1961, and *Evolution in Plant Design*, 1969.

DÜMMER (Richard Arnold; *ca* 1887-1922), gardener and collector, was a student gardener at the Botanic Gardens, Kew, from the Municipal Gardens, Cape Town, during 1910-11. In 1914 he went to Uganda and sent to Kew many collections of plants and fungi from Uganda and Kenya. *J.Bot.* 1923: 158; *Butler (1929): 16; D: 199 (BB: 97).*

DUNCAN (James Thompson; 1884-1958) did more than anyone else to modernise the approach to medical mycology in the UK after the Second World War.

Born in Dublin, where he qualified in medicine in 1911, Duncan held various posts in Singapore from 1913 but had to return to England in 1919

Figure 12. James Thompson Duncan (1884-1958)

because of ill health. He was soon appointed to the London School of Hygiene & Tropical Medicine where in 1929 he was made lecturer in tropical bacteriology. Here he was able to give his mycological interests play and gave an annual series of lectures on aspects of industrial mycology (a course later taken over by **G. Smith**) and to this class and students for the Diploma of Tropical Medicine increasingly comprehensive accounts of mycotic infections for which he built up a superb collection of reference material. During the war Duncan was seconded to the Public Health Laboratory Service and took charge of the Winchester

Laboratory from which he made the first modern survey of the mycoses of Great Britain (see *BMJ* 1948 **2**: 715-18). He subsequently became the first Director of the Mycological Reference Laboratory of the PHLS based at the LSHTM and in 1947 was appointed the first University of London Reader in Medical Mycology. He also served as the first Chairman of the Medical Research Council's Medical Mycology Committee (see **S. P. Wiltshire**).

In 1947 the cultures of fungi of medical and veterinary interest in the National Collection of Type Cultures were transferred to the Mycological Reference Laboratory (see **R. T. St. John-Brooks**).

Duncan published relatively little although he had a comprehensive textbook on medical mycology in manuscript and under constant revision but this was never finished. His wide influence is shown by the number of publications by others in which acknowledgement is made for his inspiration or help. *Lancet* 1958 **1**: 1285; *BMJ* 1958 **1**: 1420-1; *TBMS* **42**: 121-2, *port.*, 1959.

DUNCAN (Peter Martin; 1821-91), MB (1846), FRS (1868), FLS (1880), practised at Colchester and Blackheath. See **A. Henfrey**. *DNB* **1**: 2408; *SC* **1**: 702; *D*: 200 (*BB*: 98).

DUNCAN (Ursula Katherine; 1910-85), lichenologist and botanist, was one of those amateur naturalists whose knowledge of their speciality gave them professional competence. Born in London, she was educated privately and in 1952 graduated BA (MA, 1956) in classics as an external student of London University. Also, as a pianist she became a Licentiate of the Royal College of Music. During her childhood the family returned to their 600 acre farmland estate at Parkhill, Arbroath, which became Ursula Duncan's base for the rest of her life apart from War Service in the Censorship Department at Inverness. Her first interest in natural history was botany and she became the recorder of the Botanical Society of the British Isles for Easter Ross and culminated in her *Flora of East Ross-shire*, 1980. She was introduced to lichens by R.H. Burn of Oxford and **W. Watson** and she was one of the few who maintained a British interest in lichenology from 1945-55. Ursula Duncan ran field courses on lichens at the Kindrogen Field Centre and provided more than a quarter of the Scottish records for Watson's *Census Catalogue*. The climax of her lichenological work was *An Introduction to British Lichens*, 1970; a much used text. Her lichen specimens are at the Royal Botanic Garden, Edinburgh. Ursula Duncan was at her best in the field and many lichenologists have acknowledged their debt to her for help and friendship (see, for example, *BLS Bulletin*, **56**: 19, 1985). She was a founder member of the British Lichen Society, which elected her to honorary membership. She was also honoured by the Bloomer Award of the Linnean Society and an honorary degree of Doctor of Laws from Dundee University. *Lichenologist* **18**: 383-5, 1986; **12**: 406, *port.*, 1980. *Swinscow, Reap a Destiny*, 1989: 222-7.

DUNSTON (Capt. Ambrose Ellis Aspinwall) amateur mycologist of Donhead St Mary, Wilts, was the brother of **T. F. G. W. Dunston**. With the help of specialists, they published lists of the fungi of the district - basidiomycetes: *Wilts. Archaeol. Nat.*

Hist. Mag, **48**, **49**, **50**, **51**, 1943-46); discomycetes, pyrenomycetes, and myxomycetes: *ibid.* **49**, 1944; reprints of these lists were liberally distributed by Capt. A. Dunston who joined the BMS in 1937.

DUNSTON (T. F. G. Warburton) amateur mycologist of Donhead St Mary. Wilts., and who also lived for a time in Ireland, was the brother of **A. E. A. Dunston**. Joined the BMS in 1947.

DU PORT (Rev. Cannon James Mourant; 1832-99), amateur naturalist, was born in Guernsey and educated at Elizabeth College. He graduated (188? from Cambridge (Caius College), and later became dean of his college. Next he was lecturer in Hebrew (1855-62), then vicar of Mattishall, Norfolk and subsequently rector of Denver (1884), being made Honorary Canon of Norwich in 1881.

He had a sound knowledge of flowering plants but specialized on fungi (particularly hymenomycetes), attending the Woolhope forays and also those of the Société Mycologie de France - his French being fluent. He contributed several articles to the *Woolhope Transactions* (including one *Woolhope Trans.* 1883: 113 'On the colours of fungi, as indicated by the Latin words used by Fries'). See **T. H. Wharton**. **C. B. Plowright** was his doctor. *TBMS I*: 82-3, *port.*, 1899; *G. J. Cooke (1935)*: 203; *D*: 201 (*BB*: 98).

DUPPA (Adeline Frances Mary; *fl.* 1870s-1880s). Her drawings of English fungi are at **BM**. *D*:201.

DURHAM (M. L.; *fl.* 1920s). Two sketch books of watercolour drawings of fungi by M. L. Durham, Hereford (*ca* 1925-6) were sold at Sotheby's 2 June 1971 (lot 61).

DYER (William Turner Thiselton), see **Thiselton-Dyer, W. T.**

E

EARLEY (William; *ca* 1835-1911), d. Croydon, Surrey, was gardening editor of *Lloyd's News* and author of *How to Grow Mushrooms*, 1869. *D*: 203.

EDMONSTON (Thomas; 1825-46), botanist, born in the Shetlands, was assistant secretary to the Botanical Society of Edinburgh and in 1845 was appointed professor of botany and natural history at Anderson's 'University', Glasgow, in 1845 but before giving any lectures joined HMS *Herald* as naturalist on a scientific voyage and was accidentally killed in Ecuador. His *A Flora of the Shetlands*, 1845, contributed to the lichens of the Shetlands (see Hawksworth & Seaward (1977):76). *DNB I*: 605; *SC I*: 723; *D*: 205 (*BB*: 100).

ELGEE (Frank; 1881-1944) was assistant curator of the Middlesborough Museum, Yorks. (1904), and subsequently curator (1923-32). He was interested in lichens, see **W. Mudd**, 'List of Cleveland Lichens' (*Proc. Cleveland Nat. Field Club*, 1913: 34-52). *D*:207.

ELLIOTT (William Thomas; 1855-1938) was a dentist who practised in London, Birmingham, and Stratford-upon-Avon. He became an authority on Myxomycetes. His specimens are at Oxford University (see *Bull. BMS* **16**:

145-50, 1982, for a catalogue). See **J.S. Bayliss-Elliott**. *Br. Dental J.* **65**: 394, 1938; *D*: 208.

ELLIS (David; 1874-1937), DSc (Lond.,1905), FRSE, was lecturer in botany and bacteriology at Glasgow West of Scotland Technical College (1904) where he became professor of bacteriology in 1925. *WWW (1929-40)*; *D*: 208.

ELLIS (Edward Augustine; 1909-86), Norfolk naturalist, writer, broadcaster, and mycologist, was born in Guernsey. In 1920 his family moved to Gorleston, Norfolk, where Ted Ellis continued schooling until he was fifteen when, there being no opening in natural history (which was Ted's consuming interest), a period of miscellaneous short-term jobs interrupted by periods of unemployment followed. Although he had no formal training in natural history, in 1928, due to his local reputation as a naturalist, he was appointed 'Natural History Assistant' at the Castle Museum, Norwich. There he remained (eventually becoming Keeper in Natural History) until 1954 when he resigned and took up freelance work. During his time at the Museum he played a major part in modernizing the natural history and geological displays and re-organizing the collections.

For some 40 years Ellis contributed a daily nature note to the *East Anglian* (the local newspaper) and later a monthly article to *The Guardian*. He also wrote *The Broads*, 1967, a standard work, from an intimate background knowledge of the Broads, living as he did (from 1946 until his death) in a cottage at Wheatfen Broad on the river Yare, which has become the most intensively recorded fen in Britain. Although no aspect of natural history came amiss, Ted Ellis's main interest was in fungi. He was encouraged by **T. Petch** (and in return supplied Petch with specimens of entomogenous fungi) and also **W. B. Grove** of Birmingham while **H. J. Howard** introduced him to myxomycetes and **A. Mayfield** to rusts. He specialized in rusts and smuts, amassed a large herbarium, and wrote popular guides to both larger and microfungi. Ted's brother, Martin B. Ellis, became chief mycologist at the Commonwealth Mycological Institute at Kew.

Ted Ellis was awarded an honorary DSc by the University of East Anglia in 1970 and the first Sidney Long Medal for conservation. After his death a memorial service was held in Norwich Cathedral (conducted by the Bishop) and a 'Ted Ellis Trust' was set up to preserve Wheatfen Broad as a nature reserve. See also **G. J. Cooke**. *East Anglian Daily Press* 23 July 1986; *E. Stone, Ted Ellis. The People's naturalist, 1988 (Norwich)*.

ELLIS (John William; 1857-1916), naturalist, was born in Doncaster, Yorks., but in the year of his birth moved to Liverpool where, except 1889-91, he lived for life. Apprenticed to a pharmacist, with the idea of succeeding his father, he turned to medicine and entered the Liverpool School of Medicine in 1876. On his death he was Lieut. Colonel in the Western Command of the Royal Ambulance Medical Corps. Dr Ellis's interests in natural history were wide and covered flowering plants and insects as well as fungi. He was an active member of the Liverpool Naturalists' Field Club (of which he served as secretary and was twice president,

1899, 1910), the Liverpool Biological Society, and took part in the work of the Liverpool Marine Biological Station at Port Erin, Isle of Man, of which he was recorder for Actinozoa. He was also a keen photographer (making a collection of photographs of mediaeval forts) and was president of the Photographic Association for 1897. Dr Ellis joined the British Mycological Society in 1910 and concentrated on pyrenomycetes and coelomycetes. He published *The Fungi of the Wirral District*, 1911-14, and regularly attended BMS forays. His drawings are at Kew (Boxes 170, 181). *TBMS* 5: 462-4, 1917; *D*: 209 (*BB*: 102).

ELLIS (William George Pharoe; 1861-1925) graduated at Cambridge (St. Catherine's College) in 1887 (MA, 1891) and became University Demonstrator in Botany. Later, in the autumn of 1893, as Lecturer on Fungoid Diseases of Plants and General Botany, he appears to have given the first course of lectures and practical work on diseases of plants in a British university. He qualified MD in 1906 and died in Cambridge. *Times* 21 August 1925.

ENGLISH (James Lake; 1820-88), umbrella-mender, taxidermist, entomologist, and naturalist, was born and died at Epping, Essex. He was one of the leaders of the first fungus foray of the Essex Field Club, on 2 October 1880, and wrote *A Manual for the Preservation of the Larger Fungi (Hymenomycetes) in their Natural Condition, by a New and Approved Method: Also a New Process for the Preservation of Wild Flowers*, 1882. *Ramsbottom* (1932): 49-50; *D*: 211 (*BB*: 103).

EVANS (Evan Price; 1882-1959), a schoolmaster who introduced ecology to schools. He published a list of the lichens of Cader Idris (*J. Ecol.* 20, 1-5, 1932). *Nature* 185: 732, 1960; *D*: 212.

EVANS, I. B. POLE, see Pole Evans, I. B.

EVANS (William; 1851-1922), an Edinburgh naturalist. His main interest was bryology but he listed the fungi of the Isle of May (*Ann. Scot. Nat. Hist.* 73: 58, 1910). *D*: 213 (*BB*: 103).

EVELYN (John; 1620-1706), MD (Leyden), FRS, diarist (see De Beer, 1955), Royalist, was of independent means. He was a founder member of the Royal Society (and secretary, 1672-3) and made gardens, which became famous, at Sayes Court, Deptford, Kent and Wotton, Surrey. Chapter XXVII of his *Sylva, or a Discourse of Forest Trees ...*, 1662, dealt with infirmities of trees and included fungi which may be diminished by exposure to the sun. In his *Acetaria, a Discourse on Sallets*, 1699, Evelyn states that mushrooms are generally banished from 'salletts'. In 1644, when travelling in France, he first saw truffles 'which is a certain earth-nut, found out by an hogg, train'd up to it, and for which those Creatures are sold at a greate price; it is in truth incomparable meate'. *DNB* 1: 651; *DSB* 4: 494-7; *De Beer* (Ed.), *The diaries of John Evelyn*, 6 vol., 1955; *J. Bowle, John Evelyn and his world. A biography*, 1981; *D*: 213 (*BB*: 103).

EYRE (Rev. William Leigh Williamson; 1841-1914), naturalist, after going to sea trained for the church. Following ordination he was curate of Sheriff Hales, Staffs. (1865-8), West Dean, Wilts. (1865-70), Huntley, Glos. (1870-2), and

Northchurch, Herts. (1872-5) before becoming rector of Swarraton and vicar of Northington, Hants. Eyre early developed an interest in fungi and was a member of the Woolhope Club and an enthusiastic supporter of the British Mycological Society (serving as president in 1902 and for a number of years donating a coloured plate to the *TBMS*). He listed the fungi of Hampshire and the Isle of Wight for the *Victoria History of the Counties of England* (1907) and found many new or rare agarics which were identified by **M. C. Cooke**, **G. E. Masee**, and later, **C. Rea**. He also made a notable collections of myxomycetes and the genus *Rubus* (both now at the Haslemere Educational Museum). He was a fellow of the Royal Meteorological Society and a member of the Hampshire Field Club. *Chlorospora eyrei* Masee and *Sabacina eyrei* Wakefield were named in his honour. *TBMS* 5: 185-6, *port.*, 1915; *D*: 215 (*BB*: 104).

F

FARADAY (Michael; 1791-1867), chemist and physicist, succeeded Humphry Davy as professor of chemistry at the Royal Institution, London. Author of *On the Practical Prevention of Dry-rot in Timber*, 1836; Faraday's inaugural lecture. Cf. **G. Birkbeck**, **W. Chapman**, **R. Dickson**, **J. Knowles**. *DNB* 1: 660; *DSB*.

FARQUHARSON (Charles Ogilvie; 1888-1918), mycologist to the Agriculture Department, Southern Provinces, Nigeria, was among the passengers missing after the loss of the SS *Burutu*, homeward bound from West Africa, on the night of 3 October 1918. Born at Murtle, Aberdeenshire, Farquharson entered Aberdeen University intending to read classics but after graduating in arts gained a BSc in 1911 with honours in botany. After a short period at Kew under **G. E. Masee**, he was appointed to Nigeria in 1912. While in Nigeria Farquharson sent to Kew a number of interesting fungi (see *Kew Bull.* 1914: 253; 1917: 104) and with **Miss G. Lister** published a list of South Nigerian mycetozoa (*J. Bot.* 1916: 121-33). *TBMS* 6: 236-7, 1919; *D*: 217 (*BB*: 105).

FARRER (William James; 1845-1906) was educated at Christ's Hospital School and graduated from Cambridge (Pembroke College). Because of ill health he sailed to Australia *ca* 1870 where he became surveyor in the Lands Department of New South Wales. From 1898 until his death he was Wheat Experimentalist and specialized in a study of cereal rust. *Kew Bull.* 1906: 226; *D*: 218.

FERGUSON (Rev. John; 1834-1907), LLD (St Andrews, 1896), minister of parishes in Forfarshire and Aberdeenshire, was a bryologist with mycological interests. By organizing a Fungus Show at Aberdeen on 18 Sept. 1874 he was instrumental in founding the Scottish Cryptogamic Society in April 1875 of which **F. B. White** served as secretary up to 1883, to be followed by **J. Stevenson** (-1903), **D. Paul** (-1922), and **R. Smith** (-1946). *J. Bot.* 1908: 31; *Ramsbottom* (1963): 173; *D*: 220 (*BB*: 107).

FINCH (Louisa; 1760-1832), see Aylesford, Countess of.

FINDLAY (Walter Philip Kennedy; 1904-85), mycologist, was born in New York of British parents, educated privately, and graduated ARCS from the Imperial College of Science, London, in 1923 when he was awarded a Ramanet Scholarship which enabled him to take a BSc (Lond.) honours degree the following year. He spent the next year as demonstrator in the Botany Department of the College doing research on decay of aircraft timber under Professor **Percy Groom** for which he was awarded a DIC. He was then awarded a Fellowship by the Empire Cotton Growing Corporation and spent a year at Cambridge and a second at the Imperial College of Tropical Agriculture, Trinidad, but as there was then no post available he was released from his obligation to the Corporation and in 1927 was appointed mycologist at the recently opened Forest Products Research Laboratory at Princes Risborough where he remained until 1958.

At Princes Risborough he became associated with **K. St G. Cartwright** (who had also studied under Professor Groom) and in 1938 they distilled the results of their research and advisory work on problems of timber decay in *Decay of Timber and its Prevention*, which became a standard text. On Cartwright's retirement, Findlay took charge of the mycology section of the FPRL and continued to publish extensively in both the scientific and trade press. In 1958 he accepted the post of Assistant Director of the Brewing Institute Research Foundation, Nutfield, Surrey, on the condition that he could continue privately consultation work on timber problems. Findlay edited or was the author of a number of books including: *Wayside and Woodland Fungi*, 1967 (reprinted, 1978) (which included coloured illustrations by **Beatrix Potter** and **E. C. Large**), *The Observer's Book of Mushrooms*, 1977, and *Fungi: Folklore, Fiction and Fact*, 1982. He travelled extensively and was for some years a member of the Surrey County Council. He was the 1949 president of the British Mycological Society (which elected him to honorary membership) and secretary (and also president) of the Biological Council. *TBMS 87: 173-4, port., 1968.*

FINDLAYSON (Daniel; 1858-1939), FLS (1898), b. Wick, Caithness; d. London, was seed analyst at James Carter & Co (1885-95) and in 1895 founded his own seed-testing laboratory. *D: 222.*

FISHER (Harry; 1860-1935), b. Nottingham; d. Grantham, Lincs., chemist and amateur botanist (speciality *Rubi*). Contributed lists of lichens and fungi to *Victoria County Histories for Lancashire 1: 82-5* (lichens), 85-6 (fungi) 1906 and *Leicestershire 1: 53-5* (lichens), 55-9 (fungi), 1907. *D:223.*

FITCH (Walter Hood; 1817-92), FLS (1857), botanical artist at Kew (1834-77), most widely known for his drawings illustrating Bentham (and **W. J. Hooker's Handbook of the British Flora**, 1865 (and later editions), redrew the plates for edn 2 of **C. D. Badham, Esculent Fungusses of England**, 1863. *W. Blunt, Botanical Illustration, 1967 223-6, 268-82 (reprint of Fitch on botanical drawing); SC 1: 840; D: 224 (BB: 109).*

FITZGERALD (Cecil Blanche), see Woodham-Smith, C. B.

FLATTERS (Abraham; ca 1848-1929), FRMS (1902), was director of Flatters &

Garnett, Manchester. He lectured on microscopic research at Manchester School of Technology and edited *The Micrologist*. *D*: 225.

FLEMING (Sir Alexander; 1881-1955), FRS (1943), bacteriologist, a lowland Scot by birth, on qualifying in medicine at St Mary's Hospital Medical School, London, in 1906 became assistant to Sir Almroth Wright at St Mary's Hospital where he remained until his retirement in 1968, becoming professor of bacteriology in 1928 and later head of the Wright-Fleming Institute. He is famous for his discovery of lysozyme (in 1922) and penicillin (*Brit. J. Exp. Path.* **10**: 226-36, 1929). He was knighted in 1944 and the next year shared the Nobel prize for medicine with **H. Florey** and **E. B. Chain**. He received a multitude of honours. The literature on Fleming and penicillin is large; the following are key publications: *DNB* **2**: 2633; *DSB* **5**: 28-31; *Biogr RS* **2**: 117-27, *port., bibl.*, 1956; *G. Macfarlane, Alexander Fleming: the Man and the Myth*, 1984 (the last may be supplemented by *R. Hare, The Birth of Penicillin ...*, 1970, for how the discovery of penicillin occurred). See also **C. J. La Touche**.

FLINTOFF (Thomas; *fl.* 1780), surgeon of Knapton, Yorks., sent fungi to **J. Bolton** (*Hist. Fungusses*, (Appendix): 170).

FLOREY (Lord Florey) Howard Walter; 1898-1968), FRS (1921; president RS, 1960-5), knighted (1944), life Peer (1968), OM (1965), medical pathologist, was an Australian by birth who graduated in medicine at Adelaide and in 1921 came to England on a Rhodes scholarship where, after studying and holding various posts, he was, in 1935, appointed professor of pathology at the Sir William Dunn School of Pathology, University of Oxford. Among his first actions as professor was the appointment of the biochemist **E. B. Chain** to his staff and the laboratory scale production of penicillin and its clinical applications followed. It was with Chain and **A. Fleming** that Florey in 1945 shared the Nobel prize for medicine for their work on penicillin. Subsequently, Florey's team developed the clinical application of cephalosporin (first described by G. Brotzu from Sardinia in 1948) and its derivatives (see E. P. Abraham and F. G. Newton, *Adv. in Chemotherapy* **2**: 25-90, 1965). *DNB* (1961-70): 370-6; *DSB* **5**: 41-4; *Biogr. RS* **17**: 255-302, *port., bibl.*, 1971; *G. Macfarlane, Howard Florey: the Making of a Great Scientist*, 1979; *T. I. Williams, Howard Florey: Penicillin and After*, 1984.

FOISTER (Charles Edward; 1903-1989), FRSE (1954); plant pathologist, was born in Cambridge where he went to school and graduated from Cambridge University (Emmanuel College) in 1925 and gained the Diploma in Agricultural Science (Plant Pathology and Entomology) in 1927. His whole career was spent in Edinburgh working for the Department of Agriculture for Scotland: assistant plant pathologist (1928-37), acting plant pathologist (1937-8), plant pathologist (1938-57), and finally director of the Scientific Service at East Craigs (1957-63). Foister was interested in the effects of weather on plant disease and in 1961 published 'Economic plant diseases of Scotland' (*Tech. Bull. Dep. Agric. Fish. Scotland*, **1**). He was awarded the Neill Prize for horticultural work in Scotland. See also **N. L. Alcock**, **A. E. W. Boyd**.

- FORSTER** (Benjamin Meggot; 1764-1829). Second son of **Edward Forster**, the elder; brother of **T. F. Forster** and **E. Forster**, the younger. Member of the firm of Forster & Sons, Russia merchants, 'but attended very little to business'. He was particularly interested in fungi and in 1820 published, under his initials only, a pamphlet (with two plates) entitled *An Introduction to the Knowledge of Fungusses: Intended, Generally, to Bring into Notice this Hitherto Much-neglected Tribe of Vegetables, ...* (see Ramsbottom (1932): 24-28 for a reprint of the opening general remarks). He also published notes on *Peziza cuticulosa* and *Clathrus cancellatus*. *DNB I:719; D:230 (BB:112)*.
- FORSTER** (Edward, the elder; 1730-1812) was a successful banker, member of the Mercers' Company, Director of the London Docks, and Governor of the Royal Exchange and of the Russia Company. He also had natural history and antiquarian interests. He was educated at Felstead school, and after spending some time in Holland, married, and settled at Walthamstow, Essex. He is said to have introduced bearded wheat into England from Smyrna. He was father of: (i) **Thomas Furley Forster**, (ii) **Benjamin Meggot Forster**, and (iii) **Edward Forster**, the younger - and as a family they made notable contributions to the mycology of Essex. *DNB I: 719; Ramsbottom (1932): 20*.
- FORSTER** (Edward, the younger; 1765-1849). Youngest son of **E. Forster**, the elder; brother of **T. F. Forster** and **B. M. Forster**. Botanist of Walthamstow, was a successful business man, is best known for being treasurer of the Linnean Society of London from 1816 until his death. He rose at six every morning and spent an hour in his garden or attending to his collections. The evening was devoted to reading and his herbarium which was eventually bought by Robert Brown for 5 guineas and formed the basis of the British herbarium at the Natural History Museum. Essex fungi extracted from his copious notes have been listed by Ramsbottom (1932): 31-42. *DNB I: 719; SC I: 861; D: 230 (BB: 112)*.
- FORSTER** (Thomas Furley; 1761-1825). Eldest son of **Edward Forster**, the elder; brother of **B. M. Forster** and **E. Forster**, the younger; father of **T. I. M. Forster**. Botanist of Walthamstow, Essex. Best known for his *Flora Tunbridgensis*, 1816 (re-issued by his son, 1842) in which he acknowledged the assistance of **J. Sowerby**, the elder, with the fungi. The three brothers helped Richard Gough with his edition of Camden's *Brittanica*, 1789, in which 21 fungi are recorded for Essex. *DNB I: 720; Ramsbottom (1932): 20; D: 231 (BB:112)*.
- FORSTER** (Thomas Ignatius Maria; 1789-1860). Son of **T. F. Forster**, was a medically qualified naturalist and astronomer. Author of *Index Fungorum*, 1819. *DNB I: 720; Ramsbottom (1932): 21; D: 231 (BB: 113)*.
- FORSYTH** (William; 1737-1804), born at Old Meldrum, Aberdeenshire, was gardener at Syon House, the Apothecaries' Garden Chelsea, and finally to H. M. George IV at Kensington and St James's. He was the author of *Observations on the Diseases, Defects, and Injuries in all Kinds of Fruit and Forest Trees. With an Account of a Particular Method of Cure Invented and Practised by William Forsyth*, 1791 (which was reprinted with additions in *A Treatise on the Culture and*

Management of Fruit-trees 1802) in which he described the basis of lime-sulphur spray. *DNB* 1: 721; *D*: 232 (*BB*: 113).

FOWLER (Rev. William Weekes; 1835-1912), Vicar of Liversedge, Yorks., was a general naturalist with fungi as one of his many interests. He encouraged study of the less well-studied groups and in 1891 when the Mycological Committee of the Yorkshire Naturalists' Union was set up at the Doncaster meeting Fowler was elected as first chairman and he and two others (**George Masee** and **H. Wager**) chaired the meetings during the next thirty years. The aims of the Committee were: '... a desire to supplement the somewhat scanty knowledge of the mycology of the county.', '... to provide earnest working mycologists in each of the Ridings. '... to meet the desire of a few mycological members of the Union for mutual intercourse'.

Fowler became president of the Lincoln Naturalists' Union when it was founded in 1893 and for a time from 1896 the YNU and the LNU held a joint annual one-day foray in Lincolnshire. With **C. Crossland** published records of Lincolnshire fungi in the *Naturalist*, 1898, 1905, 1910-11. He also played a part in the formation of the British Mycological Society (see **A. Clarke**). *Blackwell* (1961), 54; *Watling* (1982), 123; *D*: 235 (*BB*: 114).

FOX (Thomas Colcott; 1848-1916) (brother of **W. Tilbury Fox**) was physician for Diseases of the Skin at Westminster Hospital, London, 1833-1913. Noted for his investigations on dermatophytes in collaboration with **F. R. Blaxall**. *BMJ* 1916 1: 636; *Lancet* 1916 1: 1017; *Brit. J. Derm.* 50: 509-11, *port.*, 1938.

FOX (William Tilbury; 1836-79) (brother of **T. Colcott Fox**) was physician Skin Department, Charing Cross Hospital, London (from 1866) and also University College Hospital. Wrote *Skin Diseases, an Inquiry into Their Parasitic Origin ...*, 1863, the first British book on medical mycology. *DNB*: 1: 729; *BMJ* 1879 1: 915-16; *Lancet* 1879 1: 825-6; *Brit. J. Derm.* 97: 573-6, 1977.

FRANCIS (Rev. Robert Bransby; c. 1768-1850) was rector of Holt, vicar of Roughton, and then East Carlton, all in Norfolk. His wife discovered *Cordyceps capitata* on *Elaphomyces granulatus* [*Sphaeria agriformis*; Bolton, tab. 130; Sowerby, tab. 354] at Holt. *Cooke* (1935): 201; *D*: 236 (*BB*: 115).

FRASER, H. C. I., see Gwynne-Vaughan, H.C.I.

FRAZER (W.) was a member of the Dublin Microscopical Club. In 1856 (*Natural Hist. Rev* 3) he published on *Saprolegnia* disease of goldfish in an attempt to discover the role of the fungus (see Muskett (1976): 398). See also **W. Archer, Porte**.

FRY (Sir Edward; 1827-1918), DCL (Oxon.),LLD (Cantab.), FRS (1883), FLS (1887), was born in Bristol of a Quaker family and graduated from University College, London, in 1855. He took up law, was raised to the bench in 1877, and became Lord Justice of Appeal (1883). From early days he had an interest in zoology and natural history (his brother, David Fry (1834-1912), was a competent botanist) and after retirement in 1892, with his daughter **Agnes Fry**, wrote *The Mycetozoa and some Questions which they Suggest*, 1899 (edn 2, 1915). *DNB* 2: 2642; *WW* (1916-26): 383; *D*: 240 (*BB*: 117).

FULLER (Clifford James; 1899-1965); born in Mauritius, educated at Oxford (New College Choir School, then Queen's College), and University College Hospital, London. He served in the artillery during the 1914-18 war and was wounded on the Somme. Appointed to the Royal Devon & Exeter Hospital in 1929 he specialised on diseases of the chest and was the first in England to differentiate 'farmers lung' as a clinical entity (see *Thorax* **8**: 59-64, 1953). *BMJ* 1965 **2**: 306, *port.*; *Lancet* 1965 **2**: 247, *port.*

G

GAGE (Sir Thomas; 1781-1820) FLS (1802), lichenologist, of Hengrave Hall, Suffolk, collected lichens in Suffolk and Ireland. *Hawksworth & Seaward* (1977): 13; *D*: 242 (*BB*: 118).

GALLOWAY (Leslie Douglas; 1897-19), BA (Cantab., 1920), MA (1924), microbiologist, attended St Olave's Grammar School, London, and during 1915-19 served in France as a private in the Artists' Rifles and Lieut. in the Royal Garrison Artillery, when he was wounded. Graduating from Cambridge (Trinity College) he spent 1921-27 at the DSIR Bacteriology Laboratory RCNF working for the Fuel Research Board on power alcohol problems, 1927-34 as mycologist to the British Cotton Industry Research Association at the Shirley Institute, Manchester, and in 1934 became Imperial Mycologist at the Imperial Institute for Agricultural Research, New Dehli, a post from which he resigned in 1928. After a period of commercial work in the North of England he set up in London as a microbiological consultant, subsequently in partnership with **E. C. Barton-Wright**. He was the author (with **A. C. Thaysen**) of *Microbiology of Starch and Sugars*, 1930, and (with **R. Burgess**) *Applied Mycology and Bacteriology*, 1937 (edn 2, 1940). See also **L. E. Morris**.

GALPINE (John; ca 1769-1806) of Blandford, Dorset, was the author of *Synoptical Compend of British Botany*, edn 2, 1819 which included 37 genera of lichens. *DNB I*: 750; *Hawksworth & Seaward* (1977): 13; *D*: 242 (*BB*: 118).

GARDINER (William; 1808-52), ALS (1849), was born in Dundee, his unmarried mother hawked pottery and at the age of ten he was apprenticed to an umbrella maker. Interested in natural history he published a *Flora of Forfarshire*, 1848, which lists 163 species of fungi, the identity of many having been confirmed by **M. J. Berkeley** (who named *Sphaeria gardineri* in his honour). For a list of other contributions on fungi and lichens of Scotland, see *Hawksworth & Seaward* (1977): 81. See also **G. Don**. *Proc. LS* 1853: 244; *SC I*: 914; *D*: 243 (*BB*: 118).

GARNER (Robert; 1808-90), FLS (1836), surgeon of Stoke, listed fungi in his *The Natural History of the County of Stafford*, 1844: 438-45. *D*: 244 (*BB*: 119).

GARNSEY (Rev. Henry Edward Fowler; 1826-1903), see Balfour, I. B. *D*: 245.

GARRETT (Stephen Denis; 1906-89) FRS (1967), graduated from the University of Cambridge (Magdalene College) in 1929 when he was appointed to a post in

Australia at the Waite Institute, Adelaide, to study take-all disease of cereals. This gave him a life-long interest in pathogenic root-infecting fungi and he periodically updated summaries of his investigations in a notable series of books (*Root Disease Fungi*, 1944; *Biology of Root-infecting Fungi*, 1956; *Soil Fungi and Fertility*, 1963; *Pathogenic Root-infecting Fungi*, 1970) and reviews. In 1933 Garrett returned to London to work under **William Brown** at the Imperial College of Science as a Leverhulme Research Fellow and two years later moved to Rothamsted Experimental Station where he remained for the next decade working on take-all and other diseases by exploiting a technique he had devised for growing replicates of his experimental plants in glass tumblers containing soil variously amended and subject to the uniform environment of the laboratory. In 1946 he went to Jamaica to study Panama disease of banana but ill health compelled a return to England when he became lecturer (1949-61), reader (1961-71), and finally professor of mycology (1971-3) at Cambridge where from 1952 he was also head of the Department of Mycology and Plant Pathology at the Cambridge Botany School. He was elected to a fellowship at his old College in 1963 and to the Royal Society in 1967. Garrett was in much demand as a speaker. He served as president of the British Mycological Society in 1954; he edited the *Transactions of the British Mycological Society* (1956-1961) and was elected an Honorary Member. He also played a leading part in promoting the First International Congress of Plant Pathology (held in London in 1968) and in the formation in 1981 of the British Society for Plant Pathology of which he was elected an Honorary Member. *Biogr. RS: port., bibl., 1990; Independent 3 Jan. 1990; Mycol. Res. 96: 157-9, port., 1992.*

GEMMELL (Alan Robertson; 1913-86), professor of biology at the University of Keele (1950-77) who became well known as a broadcaster, began his career as a plant pathologist. After graduating with first class honours in botany from Glasgow University in 1934 he spent 1935-7 as a Commonwealth Fellow working under E. C. Stakman at the Plant Pathology Department of the University of Minnesota where he was awarded a MS (Plant Pathology). He then returned to Glasgow and aided by grants from the ARC and the Carnegie Trust worked on the potato eelworm and from 1942-4, as lecturer in botany, gave a course of lectures on plant pathology to students reading for Honours. Subsequently, before being appointed to Keele, he was biologist at the West Midlands Forensic Laboratory (1944-5) and lecturer in botany at Manchester University (1945-50).

GERARD (John; 1545-1612), a barber surgeon of London, is the best known English herbalist but, according to **Agnes Arber**, 'doesn't, it must be confessed, fully deserve the fame which has fallen to his share'. His reputation rests on *The Herball or Generall Historie of Plantes*, 1597, which is an amendment and rearrangement of an English translation of Dodoe's *Stirpium Historia Pemptades Sex*, 1583, made by a Dr Priest for the London printer John Norton. Gerard's *Herball* was re-issued in 1633, very much improved by **Thomas Johnson**. In this revision Chapt. 167 covers 'Mushrumes, or Toadstools' ('whereof some are very

venomous and full of poison, others not so noisome; and neither of them very wholesome meate') with wood-block illustrations from books by Clusius, L'Obel, and others printed by the Plantin Press, Antwerp. The identity of many of the lichens listed is uncertain. *DNB I*: 773; *Arber (1938)*: 129-35, *port.*; *SC I*: 933; *D*: 248 (*BB*: 120).

GIBBS (Thomas; 1865-1919) of Sheffield, Yorks., was a solicitor. He collected fungi in Yorkshire and Derbyshire, compiled a fungus flora of the latter county, and read a paper to the Linnean Society on coprophilous fungi (*Proc. LS* **38**: 408-17, 1909). Gibbs was a Foundation Member of the BMS. *Coprinus gibsii* Masee & Crossland. *Naturalist 1919*: 177, *port.*, *bibl.*; *Blackwell (1961)*: 63-4; *D*: 249 (*BB*: 121).

GIBSON (Alexander George; 1875-1950), DM (Oxon. 1908), MA (Oxon.), BSc (Lond.), FRCP (1913), physician (and pathologist) at the Radcliffe Infirmary, Oxford, and later demonstrator in pathology at the Dunn School of Pathology. He was on the committee which appointed **H. Florey** as professor at the Sir William Dunn School of Pathology, Oxford in 1935. He finally became recorder in morbid anatomy and director of pathology at the Nuffield Institute housed in new buildings at the Radcliffe Infirmary of which he wrote a history (1935). He was also the author of *Mycoses of the Spleen*, 1930. *Lancet, 1950 I*: 140-1, *port.*

GIBSON (Thomas; 1897-1973), agricultural bacteriologist, was educated at the Edinburgh Academy and, after active service in the First World War, graduated from Edinburgh University. From 1923-63 he was on the teaching staff of the East of Scotland College of Agriculture, Edinburgh, and for the last 16 years head of the bacteriology department. His bacteriological interests were wide and included soil bacteria, food and milk deterioration, fodder conservation, and plant diseases. *Times 17 Nov. 1973*.

GILBERT (Sir Joseph Henry; 1817-1901), PhD (Giessen, 1840), FRS (1860), FLS (1875), made agricultural experiments with **J. B. Lawes** at Rothamsted, Harpenden, Herts, from 1843 and became professor of rural economy at Oxford, 1884-90. *DNB I*: 2654; *Oliver (1913)*: 233-42, *port.*; *D*: 251 (*BB*: 122).

GLASSCOCK (Harold Handley; 1906-91), MSc, Dipl. Agric (Wye), F. I. Biol., plant pathologist, worked at the South East Agricultural College, Wye, first in Department of Advisory Chemistry and then, 1938-46, as assistant advisory mycologist (plant pathologist) under **W. M. Ware** whom he succeeded. He retired in 1971.

GLYNNE (Mary Dilys; 1895-1991), DSc (Wales, 1943), OBE (1960), plant pathologist, was born in Bangor, attended the Girls' County School, Bangor, and the North London Collegiate School, and graduated from the University College of Wales, Bangor. In 1917 she joined Rothamsted Experimental Station as a voluntary worker where she attained the rank of principal scientific worker and remained at Harpenden until her final retirement (after two years as a voluntary worker) in 1962. She is remembered for two major studies - on wart disease (*Synchytrium endobioticum*) of potato and *Pseudocercospora herpotrichoides* on cereals. In

the 1920s she introduced a method for the rapid assessment of resistance or susceptibility of potato varieties to wart disease (*AAB* **12**: 34-60, 1925; **13**: 358-9, 1926) and was the first to record *P. herpotrichoides* (as *Cercospora herpotrichoides*) in Britain (*TBMS* **20**: 120-1, 1936) as the cause of a foot rot causing lodging in cereals of which she made a detailed study. An expert climber (she ascended Mont Blanc and the Matterhorn in the Alps and when visiting Japan in her seventies Mount Fujiyama) and a keen rock climber, she took an interest in local archaeology. *The Independent* 15 May 1991.

GOSSELIN (Joshua; 1739-1813), listed lichens and fungi of the Channel Islands in his *Flora Sarniensis* 1788 (Ray Society reprint, 1982: 193, 197-8). *D*: 260 (*BB*: 126).

GOULD (Francis Gerald; 1875-1946) amateur botanist and mycologist of Trapps Hill, Loughton, Essex, left school at 15 and joined the London Postal Service as a telegraphist. After steady promotion, on his retirement 45 years later, he was Assistant Controller. As first secretary of the League of Nations Union in Loughton he was an active peace worker and he was responsible for the revival of the Loughton Debating Society. Gould was a keen botanist and horticulturalist (specializing in daffodils) and stimulated by a University Extension Course lecture on toadstools in 1902 developed a serious interest in agaricology. He joined the British Mycological Society in 1918 and was elected president for 1936 when his presidential address was entitled 'The aesthetic appreciation of the larger fungi' (*TBMS* **22**: 14-26, 1938). Gould became a familiar figure at fungus forays of the Essex Field Club and the BMS, at which, armed with a large flat-bottomed butcher's basket, he collected typical specimens of common fungi together with rarities as replacements and supplements to the exhibition at the foray work centre. *Loughton, Chigwell, Buckhurst Hill & Woodford Gazette* 13 Dec. 1946.

GRADDON (William Douglas; 1896-1989), BSc (Lond.), AMIChemE, a chemical engineer by profession, spent all his working life with Composition Billiard Ball Supply Co. Ltd; first at Stratford, London, and then Congleton, Cheshire, where he became managing-director. His wife was a violinist and he was an expert and lifelong pianist in spite of losing a thumb and part of a finger of his left hand in an industrial accident. On retirement he lived at Ross-on-Wye. Graddon joined the British Mycological Society in 1942, became president (1956), received the Society's Benefactors' Medal (1983), and was a regular attender at forays. He also, over the years, contributed a number of papers on discomycetes (his speciality) to the *Transactions*. *Graddonia* Dennis (1955) was named in his honour. *Mycologist* **4**: 155, 1990.

GRAINGER (Jennie; 1891-1969), headmistress of the Helme School, Yorks., for 29 years, for a quarter of a century made the arrangements for the spring and autumn fungus forays of the Yorkshire Naturalists' Union on behalf of the Mycological Committee (of which she was chairman for 1965). **John Grainger** was her brother. *Naturalist* 1969: 106.

GRAINGER (John; 1904-78), plant pathologist, was a Yorkshire man who graduated (1928) and later was awarded a PhD (1950) at Leeds University. After serving as

assistant lecturer in horticultural botany at Leeds and as director of the Tolson Memorial Museum, Huddersfield, Grainger became head of the Department of Plant Pathology, West of Scotland Agricultural College, Auchincruive (1944-69).

One of his main interests was disease assessment. He developed machines for mixing small quantities of pesticides into soil (which won silver medals at the Highland and Royal Agricultural Shows) and also designed the Auchincruive Blight Forecast Recorder for potato blight. He was the author of *Virus Diseases of Plants*, 1933, and *Garden Science*, 1934. Grainger was an active member of the Yorkshire Naturalists' Union and completed the *Catalogue of Yorkshire Fungi*, 1937, after the death of **F. A. Mason**. **Jennie Grainger** was his sister. *FBPP News* 2: 84-5; *Phytopathology* 69: 4, port., 1979.

GRANT (Alexander; 1848-1906), b. Cullen, Banffshire, was employed by the Royal Botanic Garden, Edinburgh, emigrated to Australia in 1878 where he worked at the Sydney Botanic Garden (from 1882), and finally became mycologist to the Department of Agriculture of N.S.W. *D*: 263 (*BB*: 128).

GRAVES (George; 1784-*ca* 1839), son of William Graves (*ca* 1754-*post* 1827), a botanical watercolourist like his father, was born at Newington Butts and lived at Walworth, Peckham, and Edinburgh. Author of *Hortus Medius*, 1834, in 1821 he concluded that *Monotropa hypopitys* was not a root parasite and noted that the roots were covered with 'a whitish, silky, somewhat fibrous matter' (which Fries, in 1832, named *Tubercinia monotropa*) (fide Ramsbottom (1953): 202). See also **E. Lees**, **T. G. Rylands**. *SC* 1: 982; *D*: 263 (*BB*: 128).

GRAY (Sir Archibald Montague Henry; 1880-1967), KCVO, CBE, TD, MD (Lond.), FRCP, FRCS, was a London dermatologist (associated with University College Hospital, etc.), and an administrator. He encouraged the development of medical mycology at the London School of Hygiene & Tropical Medicine and served as chairman of the Medical Research Council's Medical Mycology Committee, 1948-1959. His Harveian Oration of 1951 was devoted to 'Dermatology from the time of Harvey' (*Lancet* 1951, 2: 795). *Times* 14 Oct. 1967, portr.; *BMJ* 1967 4: 178, portr.; *Lancet* 1967 2: 897, portr., 948; *Brit. J. Derm.* 50: 943, portr., 1938; 79: 107-9, portr., 1967.

GRAY (John Edward; 1800-75), FRS (1832), FLS (1857), worked at the Zoology Department of the British Museum, 1824-75 (as keeper from 1840). He was the son of **S. F. Gray**. *DNB* 1: 829; *SC* 1: 993; *D*: 264 (*BB*: 129).

GRAY (Peter; 1818-99), lichenologist, was a journalist of Dumfries. Author of *Lichens and Mosses*, 1886. See **E. M. Holmes**. *J. Bot.* 1899: 336; *D*: 265 (*BB*: 129).

GRAY (Samuel Frederick; 1766-1828), naturalist and pharmacologist, was the son of Samuel Gray (1739-71), a seedsman of Pall Mall, and the father of **J. E. Gray**. His *Natural Arrangement of British Plants*, 2 vols., 1821, which includes both fungi and 394 lichens, is the work of his son. *DNB* 1: 830; *Hawksworth & Seaward* (1977): 13; *SC* 1: 994; *D*: 265 (*BB*: 129).

GREEN (Conrad Theodore; 1863-1940), Birkenhead physician, was a keen naturalist and served as president of the Liverpool Botanical Society for 1934. In 1901-2 he

published *Preliminary Index of Local Fungi, Mainly from Wirral*. Often seen at British Mycological Society forays, he was a proficient photographer. There is a series of 400 of his hand-tinted projection slides at the Royal Botanic Gardens, Kew. *Nature* **145**: 170, 1940; *D*: 265.

GREEN (Donald Edwin; 1898-1968), plant pathologist, was born at Newport, Mon., and after serving in the Army during the First World War graduated from University College, Bangor. After acting as assistant to **T. Whitehead** at Bangor (1924-5) and as assistant plant pathologist at Leeds (1926-8), he became mycologist at the Royal Horticultural Society's Garden, Wisley (1928-64), where he investigated a diversity of diseases. He wrote *Diseases of Vegetables*, 1943, and in 1961 was awarded the RHS Veitch Memorial Gold Medal. *Gardeners' Chronicle* **165**: 35, *port.*, 1969; *D*: 266.

GREEN (Joseph Reynolds; 1848-1914), FRS (1895), botanist and botanical historian, was born at Stowmarket, Suffolk. In 1880 he gained a London University BSc and graduated at Cambridge (Trinity College) in 1884 (MA Cantab., 1888).

He was professor of botany to the Pharmaceutical Society of Great Britain from 1887 to 1907 and then lecturer on vegetable physiology at Liverpool University. President of Section K (Botany) of the British Association for 1902, he is best remembered for his continuation of Sach's history of botany from 1860-1900 and his *History of Botany in the United Kingdom*, 1914. Among his other writings is *The Soluble Ferments and Fermentation*, 1899 (German translation as *Die Enzyme*, 1902). *Nature* **93**: 379-80, 1914; *Pharm. J.* **38**: 838, *port.*, 1914; *WW (1897-1915)*: 215; *D*: 266 (*BB*: 129).

GREGORY (Philip Herries; 1907-86), FRS (1962), was a versatile mycologist and plant pathologist who had a varied and fruitful career. Born in Exmouth, Devon, he was partially educated at home because of asthma to which he was subject throughout

Figure 13. Philip Herries Gregory (1907-86)

life.

In 1928 on graduating from Brighton Technical College (where he was a student of Mrs **Alice Bacon**), as an external student of London University he entered the Imperial College of Science for post-graduate work under Professor **W. Brown**. Having to seek his first post during the nineteen-thirties' slump when jobs were scarce and precarious, at the instigation of Professor **A. H. R. Buller** he emigrated to Canada and spent the next four years studying dermatophytes and ringworm in collaboration with the dermatologist A.W. Davidson (see **P. Tate**). Returning to England Gregory worked at the Seale Hayne Agricultural College on narcissus diseases in the West of England and the Scilly Isles and after the outbreak of war joined an Agricultural Research Council team, based in Harpenden, to study the epidemiology of potato viruses - an extensive report on the survey being published after the war. At the end of hostilities Gregory was

seconded for a year to work with the penicillin team of Imperial Chemical Industries in Manchester after which he returned to his base at Rothamsted Experimental Station where his post was made permanent.

The potato virus work had drawn Gregory's attention to disease gradients and with the help of his wife offered a mathematical treatment of infection gradients (see *TBMS* **28**: 26-72, 1945). This was followed by a basic study of spore dispersal and deposition (which involved the development of an experimental wind tunnel; and also the Hirst trap (based on the cascade impactor) by one of his collaborators) and some of the resulting conclusions were included in his presidential address to the British Mycological Society in 1951 (see *TBMS* **35**: 1-18, 1952). These studies continued during his 4-year tenure (1954-58) as professor of botany at the Imperial College (as successor to **W. Brown**), a post from which he had to resign after a major pulmonary operation and ten months in hospital. He returned to Rothamsted as head of the Plant Pathology Department. Research on aerobiology continued and culminated in his *Microbiology of the Atmosphere* 1961 (edn 2, 1973) which became a standard text.

One project which merits special mention was the solution of the aetiology of 'farmers' lung' (associated with mouldy hay) which Gregory's team in conjunction with workers at the Brompton Hospital in London showed to be caused by spores of the aerobic actinomycete *Thermopolyspora polyspora* (*Faenia rectivirgula*).

After retirement at the age of sixty Gregory became an international consultant on cocoa diseases (black pod in particular) on which a final report (edited by Gregory & A.C. Madison) was published in 1981 and was the subject of a book he edited : *Phytophthora Disease of Cacao*, 1974.

Gregory was Editor of the *Transactions* (1950-55) and was an all round mycologist, a regular forayer, and played a part in founding the British Society for Plant Pathology and the British Society for Mycopathology, two societies which together with the British Mycological Society elected him to Honorary Membership. *Biogr. RS* **35**: 153-77, port., bibl., 1990; *TBMS* **91**: 191-2, port., 1988; *Times* 16 February 1986; *P. H. Gregory, Ann. Rev. Phytopath.* **15**: 1-11, port., 1977.

GREVILLE (Robert Kaye; 1794-1866), FRSE (1821), LLD (Glasgow, 1824), FLS (1827), botanist and mycologist, was born at Bishop Auckland, Co. Durham, and after studying medicine in London and Edinburgh without achieving a qualification married and moved to Edinburgh where he lived for the rest of his life. Of independent means, Greville was an ardent collector but towards the end of his life was obliged to sell his collections. His diatoms are now at the British Museum, insects at Edinburgh University, and the flowering plants and cryptogams, representing some fifty thousand species, at the Edinburgh Botanic Garden and Glasgow University. Fungi were a special interest and Greville was instrumental in directing the Rev. **M. J. Berkeley**'s attention from mosses and algae to fungi and in introducing the latter to **W. J. Hooker**, then professor of

botany at Glasgow University. From 1823-28 he issued six volumes of *Scottish Cryptogamic Flora* (in monthly parts) consisting of coloured plates and descriptions which included many larger fungi, and in 1824 published *Flora Edinensis* covering all groups. Greville had many interests. He was a prominent supporter of the anti-slavery campaign and teetotalism and also, though an episcopalian himself, with the Rev T. K. Drummond compiled a Church of England hymnbook. See also **D. Carmichael. M.C. Cooke** named the periodical *Grevillea* (1872-94) in his honour. *DNB I: 842; Trans. Bot. Soc. Edinb. 8: 463-76, 1866; Mycologist 4: 73, port., 1990; SC I: 1001; D: 268 (BB: 130).*

GRIFFITH (John Wynne; 1763-1834), FLS (1795), Welsh bryologist and lichenologist, was a friend of **W. Withering** and contributed to the latter's *Botanical Arrangement. D: 270 (BB: 131).*

GRIFFITH (John William; 1819-1901), see **A. Henfrey.**

GRIFFITHS (Griffiths Hooper; ca 1823-72), MD, lichenologist and musicologist, was secretary of the Worcester Natural History Society. *D: 271.*

GRINDON (Leopold Hartley; 1818-1904) was born in Bristol where he was a founder member of the Philo-botanical Society of Bristol. On moving to Manchester as a cashier Grindon was a founder member of the Manchester Field Naturalists' Society of which he became president. In his *The Manchester Flora*, 1859, he included lichens (pp. 514-9) and fungi (pp. 523-29). *D: 272 (BB: 132).*

GROOM (Percy; 1865-1931), BSc (Birmingham), DSc (Oxon), FLS (1889), FRS (1924), botanist, was educated at Mason College, Birmingham, Bonn University, and the University of Cambridge (Trinity College), where he graduated in 1887 and was awarded the Frank Smart Scholarship. He then held a variety of posts (professor of botany and aboriculture, Whampoa, China (1889-92), lecturer in plant physiology at Edinburgh (1898), head of the biology department, Royal Indian Engineering College, Cooper's Hill, Surrey (1899-1905), lecturer in botany, Northern Polytechnic Institute (1907-8) before joining the Imperial College of Science & Technology as assistant professor of botany (1908-11) and then professor of technology of woods and fibres (1911-31), a field in which he became expert **K. St. G. Cartwright** and **W. P. K. Findlay** were two of his students. He wrote many and various scientific papers and *Trees and Their Life Histories*, 1907. *Obit. RS I: 63-4, port., 1933; WWW (1929-40): 562; D: 272.*

GROVE (William Bywater; 1848-1938) was born and died in Birmingham. He was educated at the Birmingham Grammar School (now King Edward's School), won a scholarship to Cambridge (St Catherine's College) and in 1871 gained the degree of BA in the Mathematical Tripos (Senior Optime). While at Cambridge he began the study of botany from books (there being no botanical teaching). After school-teaching posts in Ramsgate and Brighton he taught in Birmingham schools from 1877 to 1900 when he was appointed lecturer in horticulture and chemistry at the Studley Horticultural College. Finally he was lecturer in botany at the Birmingham Municipal Technical School from 1905-27.

Grove was an active member of the Birmingham Natural History Society in which he held various offices. As with botany, he was a self-educated mycologist but he admits to receiving much help from **M. J. Berkeley**, **C. B. Plowright**, **M. C. Cooke**, **George Masee**, and other correspondents. In 1884 he monographed the Pilobolidae (a revised version of which appeared in Buller, *Researches on Fungi*, **6**, 1924). His special studies of the Uredinales resulted in *British Rust-fungi*, 1913, which was the standard account for a generation, and his

Figure 14. William Bywater Grove (1848-1938)

extensive collecting of coelomycetes was the basis of the 2-volume *British Stem- and Leaf-fungi (Coelomycetes)*, 1935-37, in which he expressed grave doubts about speciation based on 'petriplateism'. Grove was a sound classical scholar and at the instigation of his friend **A. H. R. Buller** he undertook the translation of the three volumes of the Tulasnes' *Selecta Fungorum Carpologia* which was published in 1931. Groves herbarium is now incorporated with that at the Royal Botanic Gardens, Kew. See also **F. Rilstone**. *J. Bot.* 1938: 86-7; *Mycologist* **2**: 168-9, *port.*, 1988; *SC* **1**: 1015; *D*: 273.

GULLIVER (George) 1804-82), FRS (1838), surgeon, after a post at St Bartholomew's Hospital, London became, in 1827, hospital assistant to the army. He was appointed Hunterian professor of comparative anatomy and physiology in 1861 and delivered the Hunterian Oration in 1863. His *Catalogue of Plants Collected in the Neighbourhood of Banbury*, 1841, includes lichens and fungi. *DNB* **1**:856; *D*:275 (*BB*:133).

GÜSSOW (Hans Theodor; 1879-1961), plant pathologist, was born in Breslau and

studied botany and plant pathology at the Universities of Breslau, Leipzig, and Berlin. He was Dominion Botanist, then Chief of the Phytopathological Service, Canada Department of Agriculture, 1909-48. He died in Vancouver.

Before going to Canada he was from 1903 assistant to W. Carruthers (see **J. B. Carruthers**) who was Botanist to the Royal Agricultural Society, 1871-1909. See also **P. A. Murphy**. *Phytopathology* **51**: 739, *port.*, 1961; *Trans. Roy. Soc. Canada ser. 3*, **56**: 191-5, 1962.

GWYNNE-VAUGHAN (Dame Helen Charlotte Isabella (née Fraser); 1879-1967), CBE (1918), DBE (1919), GBE (1929), Hon.LLD (Glasgow, 1920), BSc (Lond., 1904), DSc (Lond., 1907), FLS (1905), mycologist and botanist, was energetic, forceful, and at times intimidating and had virtually two careers. During the First World War she became chief controller of the Women's Army Auxillary Corps with the British armies in France on its formation in 1917 and subsequently (until 1919) commandant of the Woman's Royal Air Force. During the Second World War she was chief controller of the Auxillary Territorial Services but she was out of tune with the times and after her enforced retirement in 1941 joined the Home Guard. She three times unsuccessfully stood for Parliament as a Conservative and in her retirement was London County Secretary of the Soldiers', Sailors' and Airmen's Association up to 1962. She died at the RAF Convalescent Home at Sussexdown, West Sussex.

Born in London, Helen Fraser was privately educated (apart from one year at Cheltenham Ladies College) and graduated in botany from King's College, London. While a student she worked for a time at the British Museum (Natural History) with **V. H. Blackman** and after graduating held posts at University College, Nottingham, and the Royal Holloway College before (in 1909) becoming head (from 1921 professor) of the botany department of Birkbeck College in succession to D. T. Gwynne-Vaughan (1871-1915) (whom she married in 1911) on his move to Queen's University, Belfast. Dame Helen had a long term interest in fungi and gave the Birkbeck Department of Botany a strong mycological bias. Cytology and life histories of fungi were a special interest and before 1914 she published in this field with Miss H. S. Chambers and again in the nineteen-twenties when Miss Chambers had become Mrs **H. S. Williamson** and Helen Fraser Mrs Gwynne-Vaughan. In collaboration with her assistant **B. F. Barnes** she wrote *The Structure and Development of Fungi*, 1926 (edn 2, 1937) which became a standard mycological text in England.

Dame Helen received the Trail Medal of the Linnean Society in 1920, served a term on the Senate of London University, and in 1928 was president of Section K (Botany) of the British Association and also of the British Mycological Society. *DNB* (1961-70): 467-9; *TBMS* **51**: 177, *port.*, 1968; *D*: 277.

H

- HADDEN** (Norman G.: ca 1888-1971) of Porlock, Somerset, was awarded a VMH for cultivating irises. He published a list of the Uredinales of North Devon (*J. Bot.* 1916: 52-4), the identifications being verified by **C. Rea**. *D*: 277.
- HAILSTONE** (Samuel; 1768-1851), FLS (1801), was a solicitor of Bradford, Yorks., and an authority on the Yorkshire flora. He contributed to *English Botany* (see **J. Sowerby**, the elder) and supplied a plant list (which included lichens) to Whitaker's *History and Antiquities of the Deanery of Craven*, 1805 (and later editions). His herbarium is at York Museum. *Seaward* (1987): 39, 40; *D*: 278 (*BB*: 135).
- HALES** (Rev. Stephen; 1677-1761), FRS (1718), was perpetual curate of Teddington, Middlesex. He is famous for his physiological experiments on both plants and animals published as *Vegetable Statics*, 1727, (dealing with root pressure in plants) which was re-issued as the first volume of *Statical Essays*, 1733, (the second volume of which deals with blood pressure in animals). He also invented a method for ventilating ships. In *Vegetable Statics* he noted hop mildew which he attributed to 'a rainy moist state of the air' which hindered 'in good measure the kindly perspiration of the leaves whereby the stagnating sap corrupts and breeds moldy fen'. *DNB I*: 867; *Oliver* (1913): 65-83, *port.*; *A.B. Clark-Kennedy, Stephen Hales D.D., F.R.S., 1929*; *D*: 278 (*BB*: 135).
- HALL**, Muriel Phyllis, see **M.P. Topping**.
- HAMMOND**(Joyce Barbara), BSc (Lond.; pass 1928, *hons bot.* 1929), PhD (1934), the daughter of P. W. Hammond, radiologist of Croydon, was educated at Croydon High School and graduated from Bedford College, University of London. Voluntary worker at East Malling Research Station, 1929-30; Ministry of Agriculture Special Grant for walnut propagation and diseases, 1930-34. PhD thesis on *Chalaropsis thielavioides*. Married **M. H. Moore**, 1934.
- HAMSON** (John; 1858-1930), assistant editor of the *Bedfordshire Times*, became president of the Bedfordshire Natural History Society. In *Victoria History of the Counties of England (Bedfordshire 1*: 61-66, 1904) he revised **C. Abbot's** list of Bedfordshire fungi (a list repeated in his *Flora of Bedfordshire*, 1906: 37-40). *D*: 282.
- HANSFORD** (Clifford George; 1900-66), plant pathologist, was born at Wincanton, Somerset, went to Sexey's School, Bruton (see **W. C. Moore**), and graduated with first class honours at Cambridge (King's College) in 1921. After spending 1922 studying microbiology in Copenhagen he was Microbiologist to the Department of Agriculture, Jamaica and subsequently served as Government Mycologist in the Department of Agriculture, Uganda (1926-46) when he continued his career in plant pathology at the Tea Research Institute, Ceylon, the Waite Institute, Adelaide (1957-C.1959), and on cotton research in Bechuanaland. He died in Natal. Hansford was an experienced tropical plant pathologist and is noted for his collections (at IMI) and investigations of the fungi of Uganda on which he published numerous taxonomic papers. The Meliolineae (*Beih. Sydowia* 2, 806 pp., 1961) were a special interest. *D*: 285.

HARDWICKE (Robert; 1825-75) was a London publisher and bookseller of 192 Piccadilly who specialized in works on medicine and natural history. Although not a mycologist, Hardwicke played an important role in spreading a knowledge of fungi. He published **M.C. Cooke's** first book, *A Manual of Structural Botany*, 1861, which was followed by *Manual of Botanic Terms*, 1862, and it was at Hardwicke's suggestion that Cooke wrote his *Plain and Easy Account of British Fungi*, 1862, (which ran to 18 editions). Subsequently he issued Cooke's *Rust, Smut, Mildew, and Mould*, 1865, and at Cooke's suggestion started, in 1865, the very successful *Hardwicke's Science Gossip* with Cooke as editor. During 1867-70 he also published the *British Medical Journal*.

Hardwicke allowed Cooke's Society of Amateur Botanists to use his premises as a meeting place and he was also one of the founders of the Quekett Microscopical Club in 1866, published its Journal, and acted as the Society's Treasurer until the end of his life. Hardwicke was elected a Fellow of the Linnean Society in 1863. *For further details see Mary P. English, Archives of Natural History* **13**: 25-37, *port.*, 1986; *D*: 286.

HARDY (James; 1815-98), LL.D. (Edinb., 1890), a general naturalist of Old Camous, Berwickshire, who published some 300 papers. He contributed 'Lichen-flora of the Eastern Borders' to *History of the Berwickshire Naturalists' Club* **4**: 396-428, 1863. *Gilbert (1980)*: 335-6, *port.*; *D*: 286 (*BB*: 139).

HARLEY (John Laker ('Jack'); 1911-90), MA (Oxon.), D.Phil (1936), FLS (1938), FRS (1964), CBE, was educated at Leeds Grammar School and graduated from Wadham College, Oxford University, with first class honours in botany. After graduation he was appointed demonstrator at Oxford where, apart from service in the Royal Corp of Signals (1940-5) and as professor of botany at Sheffield University (1965-69), he spent the rest of his working life and became professor of forest science, 1969-79. His main interest was mycorrhiza and he summarized his own investigations and reviewed this field in *The Biology of Mycorrhiza*, 1959 (edn 2, 1970), *Mycorrhizal Symbiosis*, 1983 (with S. E. Smith, his daughter), and *A Check List of Mycorrhiza in the British Flora* (with E. L. Harley, his wife) *Suppl. New Phytol.* **105**, 102 pp., 1987), all standard texts.

Harley received many honours and was president of the British Mycological Society (1967), the British Ecological Society (1970-2), the British Association, Sect K (Botany), 1972, and the Institute of Biology. He was awarded the Linnean Medal for Botany (1988) and served on the Agricultural Research Council, 1970-80. *Biogr. RS*: *port.*, *bibl.*, 1991; *Times* 28 Dec. 1990, *port.*; *Linnean* **5**: 49-50, 1989; *Mycol. Res.* **96**: 239-40, *port.*, 1991.

HARRIMAN (Rev. John; 1760-1831), botanist, was rector of Eglestone, Yorks., and, from 1801, Gainford, Durham, and contributed some lichens to *English Botany* (see **J. Sowerby**, 1757-1822) and to **W. J. Winch**, *Botanists' Guide ...*, 1807. *DNB I*: 901; *Seaward (1987)*: 40; *D*: 288 (*BB*: 140).

HARRIS (Ralph Vivian; 1898-1980), plant pathologist, graduated from the Imperial College of Science. After post-graduate work at East Malling Research Station on

strawberry and raspberry diseases he was appointed assistant pathologist at the Station where he remained until retirement in 1963, succeeding **H. H. Wormald** as head of the Plant Pathology Department in 1941 and from 1958 acting as full-time adviser to the Director. During 1932-3 he exchanged with G. H. Berkeley (of St. Catherine's, Ontario) and between 1937 and 1939 had a breakdown in health. He is remembered for his work on blue stripe disease (*Verticillium dahliae*) of raspberry, *Verticillium* (*V. albo-atrum*) disease of hops, and his study on aphid-borne virus diseases of strawberry and raspberry. President of the Association of Applied Biologists (1959) he was a cultured man and an authority on Japanese art. *FBPP News* 6: 48-9, 1981.

HARROLD (C. Edward; 1923-82), graduated from Queen Mary College, University of London, and after post-graduate studies at Cambridge (under **F. T. Brooks**) and G. W. Beadle at the California Institute of Technology, became in 1951 a lecturer (later senior lecturer) at Birmingham University where he developed a special interest in fungal physiology. He was for many years warden of Manor House and acted as local secretary for the BMS Autumn Foray at Birmingham in 1962. *Bull. BMS* 16: 170, 1982.

HART (John William; 1887-1916) was killed in France on the Somme on 15 September 1916. After wheat-farming in Canada and working a small-holding in Wiltshire, Hart obtained a Diploma in Horticulture at Reading where he paid particular attention to plant diseases. Appointed head of the Botanical Garden of Bedford College for Women, London University, he studied botany at Birkbeck College which granted him a war-time BSc. He was a true naturalist and sent home botanical and geological specimens from the front line trenches. *TBMS* 5: 464-6, 1917; *D*: 291.

HARTLEY (John William; 1866-1939), a Lancashire naturalist, with **J. A. Wheldon**, published a list of the lichens of the Isle of Man, 1927. *Hawksworth & Seaward* (1977): 28, 89 (*bibl.*).

HARTOG (Marcus Manuel; 1851-1924). Professor of natural history at Queen's College, Cork. Published on the Saprolegniaceae (see *D*: 291). **E. J. Butler** was one of his students. *D*: 291 (*BB*: 141).

HARVEY (Joshua Reubens; fl. 1830-40s) algologist, was a physician of Cork. His *Contributions Towards a Fauna and Flora of the County of Cork*, 1845, included lichens (pp. 95-102) and fungi (pp. 120-30). *D*: 292.

HASSALL (Arthur Hill; 1817-94) was a versatile man and an expert microscopist who practised as a physician in London, 1843-66. He wrote *A History of British Freshwater Algae*, 1845, and *The Microscopic Anatomy of the Human Body in Health and Disease*, 1849 (in which he described for the first time the cellular bodies in the thymus, the 'corpuscles of Hassall'), and founded the National Hospital for Consumption at Ventnor, Isle of Wight, 1868. His notable microscopic work on London water in relation to cholera and his 'elucidation and exposure of adulteration in food, drink, and medicine' undertaken in collaboration with Thomas Wakley MP, editor of *The Lancet* in which a series of reports

appeared during 1851-54 under the title 'Reports of the Lancet Analytic Committee' stimulated legislation and the award to Hassall, in 1866, of a Civil List Pension of £100. Hassall's name is included here because during the early 1840s he demonstrated by a number of experiments that a range of microfungi could induce rotting of fruit and disease in lettuce and diverse vegetables. Further, in 1845, in a letter to the *Bristol Mercury* (reprinted by Gray), he attributed potato blight to a fungus infection and offered some sensible control measures, a year before **M. J. Berkeley** came to the same conclusion. See also **J. Ralfs**. *E. A. Gray, By Candlelight. The Life of Dr Arthur Hill Hassall, 1983 (London); SC 2: 92; D: 293.*

HASSELL (Frederick Charles; 1879-1959), Irish by birth and upbringing, started work in the English Civil Service and joined the Customs and Excise Service. In 1922 he returned to Ireland where in 1933 he became Chief Inspector of Customs and Excise until his retirement in 1944. He joined the Dublin Naturalists' Field Club in 1938 and the British Mycological Society in 1946 and guided by **Elsie M. Wakefield**, **R. W. G. Dennis**, and **A. A. Pearson**, undertook a mycological survey of North Bull Island, Co. Dublin (see *Irish Nat. J.* **11**(1), 1953), which added 67 names to the Irish records and 6 to the British Isles list. *News Bull. BMS* **12: 11, 1959.**

HASTINGS (Somerville; 1878-1967), a London nose and throat specialist, was a keen photographer of the larger fungi. He contributed two volumes, on *Toadstools at Home* (1906, 1911), to Gowan's Nature Books. Each of these parchment covered volumes (Numbers 7 and 25 of the series) which proved very popular, included 60 black and white photographs (also available as lantern slides) together with notes by the author. Somerville Hastings, with J. E. Mottram, also wrote a paper on the edibility of fungi for rodents (*TBMS* **23: 364-78, 1917**) among other mycological publications. Somerville Hastings qualified in medicine from University College London, where he won both silver and gold medals for botany, and was for many years consultant at the Middlesex Hospital. An active socialist, he served as Member of Parliament, representing Labour, for Reading (1923-4, 1929-31), then Barking (1945-49). The first president of the Socialist Medical Association (1929-51), he was in 1932 elected to the London County Council, serving as Chairman, 1944-5. He never allowed his strong political views to conflict with professional decisions but was forward looking and, according to Lady Summerskill, the idea for a National Health Service germinated in the hospitable atmosphere of his Devonshire Street home as early as about 1929.

He had wide interests in natural history and contributed two volumes on wild flowers to the Gowan series and wrote a book on alpine plants. He had a life-long attachment to fungi and after his retirement entertained forayers to tea at his home on Peppard Common. *BMJ* **1967 3: 182, port.**; *Lancet* **1967 2: 161, port.**; *Mycologist* **5: 149, port., 1991; D: 293.**

HAWKER (Lilian Edith; 1908-91), BSc (Reading, 1928, 1929), MSc (Reading), PhD (London, 1940), DSc (Lond., 1944), mycologist, was born at Reading and

graduated from Reading University. After postgraduate work at Reading and a year at Manchester she joined the Imperial College where she was successively research assistant, demonstrator, and assistant lecturer in mycology and plant pathology under Professor **W. Brown**. In 1945 she became lecturer at Bristol University where she was later reader in mycology (1948 and finally professor of mycology (1965) and for 1970-73 she was Bristol's first woman dean of a faculty). She was the author of *Physiology of Fungi*, 1950, *The Physiology of Reproduction in Fungi*, 1957, *Fungi*, 1960; also editor (with A. H. Linton) of *Microbiology*. She revived the study of truffles in England and this project culminated in a monograph on the British hypogeous fungi (*Phil. Trans. B* **237**: 453-526, 1954). She was president of the British Mycological Society (1955) which elected her to Honorary membership. One hobby of long standing was painting in watercolours and later oils. *Mycol. Res.* **93**: 1343-4, port., 1991.

Figure 15. Lilian Edith Hawker (1908-91)

HAWLEY (Sir Henry Cusack Wingfield; 1876-1923), naturalist, was born at Parkside, Worcester Park, and after Eton, graduated from Oxford (Magdalene College). He then read for the bar but never practised and on the death of his father in 1905 became the 6th baronet. He saw army service throughout the First World War in the Royal West Kent Regiment. A keen general naturalist with a particular interest in fungi (stimulated by **C. Crossland**) Hawley specialized in discomycetes (corresponding with Boudier) and pyrenomycetes (but a monograph of the group he had in preparation was never completed). His specimens, papers, and drawings are at the British Museum (Natural History). *TBMS* **9**: 241-3, 1924; *Ainsworth & Waterhouse* (1989): 18 (*Lincolnshire fungi*); *D*: 295 (*BB*: 143).

HAY (William Delisle; fl. 1887), popular science writer, was the author of *An Elementary Text-book of British Fungi*, 1887, and *The Fungus-hunter's Guide, and Field Memorandum-book. With Analytical Keys to the Orders and Genera, Illustrated, and Notes of Important Species*, 1887 (new edn. 1906). *SC* **2**: 107-8.

HEBDEN (Thomas; 1849-1921), director of a power loom firm of Cullingworth, Yorks., was particularly interested in lichens and fungi. He corresponded with W. Nylander and other leading foreign lichenologists and had an extensive lichen

herbarium (now at Keighley Museum; M. R. D. Seaward, *Guide to the Lichenological Collections of Thomas Hebden (1849-1931)*, port., 1971). He was for a time Distributor for the Lichen Exchange Club (see **A. R. Horewood**). *Nature* **127**: 346, 1931; *TBMS* **18**: 93, 1933; *Blackwell* (1961): 56; *D*: 298. *Hawksworth & Seaward* (1977): 29; *Seaward* (1987) 46.

HEELIS (Mrs H. B.), see **H. B. Potter**.

HENDERSON (F. Y.; 1894-1966), DSc (Glasgow), OBE (1952), after service at the Imperial college, London, became director of the Forest Products Research Laboratory, Princes Risborough, Bucks. (1945-61). Author of *Handbook of Soft Woods*, 1957. *Nature* **211**: 129, 1966; *D*: 300.

HENFREY (Arthur; 1819-59), became professor of botany at King's College, London (1852-9). Author (with **J. W. Griffith**) of *The Micrographic Dictionary*, 1856 (edn 3, by Griffith and **P. M. Duncan** assisted by **M. J. Berkeley**, 1875; edn 4, 1883). *DNB* **1**: 935; *F. W. Oliver in Oliver* (1913): 192-203; *SC* **2**: 154; *D*: 301 (*BB*: 145).

HENNEDY (Roger; 1809-77). After various posts as a wood block cutter became professor of botany at Anderson College, Glasgow (1863-77). He was the author of *The Clydesdale Flora*, 1865, which does not include fungi but some 150 specimens of fungi collected by Hennedy are now at Strathclyde University (Department of Bioscience & Biotechnology; fide Watling (1986): 31, note 27). See **T. King**. *DNB* **1**: 937; *D*: 301 (*BB*: 145).

HENSLOW (Rev. John Stevens; 1796-1861), botanist, geologist, and Anglican clergyman, took Holy Orders in 1824 and became curate of St Mary the Less, Cambridge, vicar of Cholsey, Berks. (1832), and then Hitcham, Suffolk where he lived from 1839. He was appointed professor of mineralogy at Cambridge University in 1822 and in 1825 succeeded **J. Martyn** as professor of botany, a position he held until 1861. Henslow was a very successful teacher and **Charles Darwin** was one of his students. The one mycological contribution which may be attributed to him is the inclusion of lichens and fungi in his and E. Skepper's *Flora of Suffolk*, 1856. See also **M. J. Berkeley**, **M. C. Potter**. *DNB* **1**: 950; *G. Henslow in Oliver* (1913): 151-63, port.; *SC* **2**: 163; *D*: 303 (*BB*: 145).

HEREMAN (Samuel; fl. 1840/5) was the author of *Blight in Flowers*, 1840. *D*: 304.

HEY (Thomas; ca 1840-1919), naturalist, was a Sheffield railwayman, president of the Midland Railway Natural History Society, and a Foundation member of the British Mycological Society. *D*: 305.

HICK (Thomas; 1840-96), assistant lecturer in botany at Owen's College, Manchester, 1885, lectured on mushrooms to the Leeds Naturalists' Club in 1870, and exhibited fungi at the Yorkshire Naturalists' Union meeting of 1879. Later he carried out an investigation, in conjunction with **George Masee** on 'the corn mildew' as they called *Puccinia graminis*. Their two papers appear together in *The Naturalist* (Blackwell (1961): 54). *J. Bot.* 1896: 488; 1897: 193-6, port.; *Proc. LS* 1896-7: 57; *SC* **2**: 190; *D*: 306 (*BB*: 147).

HICKMAN (Clarence James; 1914-80), plant pathologist, mycologist, was born and

went to school in Birmingham and graduated with first class honours in botany from Birmingham University where he continued post-graduate studies for his PhD (1936).

He was then appointed assistant to **L. Ogilvie** to work on vegetable diseases in the Vale of Evesham. In 1938 his interest in *Phytophthora* led to his appointment as Agricultural Research Council Research Officer to work on 'red core' of strawberry in a field laboratory at Westerham Kent, when he described the causal pathogen as a new species, *P. fragariae*. On the outbreak of war in 1939 he moved to the Long Ashton Research Station for work on vegetable seed disinfection. In 1944 he returned to Birmingham University as lecturer in botany and was promoted to reader in 1955. He emigrated to Canada in 1960 on being appointed professor of botany at the University of Western Ontario, London, Ontario, where he developed more research on *Phytophthora*. Hickman was an active member of the British Mycological Society. He was chairman of the Plant Pathology Committee (1942-6), secretary (1948-52), and president (1957), and regularly attended forays. He developed an interest in agarics and built up a collection of colour transparencies. He was a neat, precise man, intolerant of shoddy work, but always ready to help and advise his students. See also **N. Alcock**. *TBMS 79: 187-8, port., 1982*.

HIERN (William Philip; 1839-1925), BA (Cantab., 1861), MA (Oxon.), FLS (1873), FRS (1903), was an enthusiastic amateur botanist. From 1882 he lived at Barnstaple, Devon, where he became a governor of Barnstaple Grammar School, president of the Devonshire Association (1917), and took up the study of the Devon flora. He published a number of records for lichens of the county (see Hawksworth & Seaward (1977):29, 94-5). *Proc. LS 1925-6: 83-4; WWW (1916-28): 494; SC 2: 191; D: 307 (BB: 147)*.

HICKS (John Braxton; 1823-97), MD (Lond., 1851), FLS (1852), FRS (1862), born at Lymington, Hants. Undertook his medical training at Guy's Hospital, London. In 1856 he became an obstetric physician at Guy's and from 1888 obstetric physician and lecturer at St Mary's Hospital. He was president and orator of the Hunterian Society for 1879. Hicks was interested in diverse aspects of natural history including mosses and lichens. *Proc. LS 1897-8: 37-8; D: 306 (BB: 147)*.

HIGGINS (Mrs D. Martha; ca 1856-1920), of Luton, Beds., was interested in myxomycetes. Her specimens are at **BM**. *D: 307*.

HIGGINS (Rev. Henry Hugh; 1814-93) was born at Turvey Abbey, Beds. and graduated from Cambridge. After taking Orders he was chaplain at the Rainhill Asylum, Liverpool (1853-86) and was president of the Liverpool Literary & Philosophical Society, 1859-62. He published an account of the hymenomycetes of Liverpool and its vicinity (*Proc. Lit. Phil. Soc. Liverpool 12: 55-106, 1858*). *J. Bot. 1893: 286-7; D: 307 (BB: 147)*.

HIGHLY (Percy; 1856-1929) was a London natural history draughtsman and lithographer. He illustrated the second edition of **A. L. Smith's** *Monograph of the British Lichens*, 1918, and 48 of his watercolour drawings of fungi (ca 1920),

mounted on cards, were sold at Sotheby's 2 June 1971 (lot 61). *D*: 307.

HILEY (Wilfred E.; 1886-1961), CBE (1956), forest pathologist and forester, graduated from Oxford University with first class honours in botany in 1908 and after post graduate research was the author of *The Fungal Diseases of the Common Larch*, 1919.

From 1926-30 he lectured in forestry economics at the Oxford School of Forestry and from 1931, after a visit to the United States to advise on the taxation of woodlands, managed the 2000 acres of Dartington Hall woodlands and became chairman of the Dartington Hall Woodlands Ltd. He was much called on for advice. He was president of the Royal Forestry Society of England & Wales which awarded him its gold medal in 1961, as did the Society of Foresters of Great Britain and he edited the *Journal of the Royal Forestry Society*, 1923-1946. *Forestry* 35: 101-2, 1962; *J. Oxford Univ. Forestry Soc.*, No.10: 6,12.

HILARY (Daisy; 1888-1959), biology teacher of Leeds, Yorks., had mycological interests. *Naturalist* 1959: 101; *D*: 307.

HILL (John; 1716-1775), who called himself 'Sir John' as a member of a Swedish order, was trained and first practised as an apothecary, had a miscellaneous career, and was a prolific writer. His most important mycological contribution was his account of fungi in *A History of Plants* (= *A General Natural History*, Vol.2), Part 1, Book 2, pp. 26-72, 1 plate, 1751, and in *Flora Britannica* (1: 580-93), 1760, he treated lichens. Hill also noted the true nature of the 'vegetable fly' as the nymph of a cicada parasitized by the fungus he called *Clavaria sobolofera* (*Phil. Trans.* 53: 271-4, 1764). *DNB* 1: 972; *DSB* 6: 400-1; *Oliver* (1913): 84-107, port. (*T. G. Hill*); *SC* 2: 198; *D*: 308 (*BB*: 148).

HIND (Rev. William Marsden; 1815-94), BA (Dublin, 1839), LLD (1870), botanist, was born near Belfast and in 1875 became rector of Honnington, Suffolk. With **C. Babbington** contributed lichens to their *Flora of Suffolk*, 1889. *D*: 330 (*BB*: 149).

HOBKIRK (Charles Codrington Pressick; 1837-1902), bank manager at Huddersfield, Yorks., served as president of the Huddersfield Naturalists' Society and of the Yorkshire Naturalists' Union. Best known as a biologist, he had an interest in mycology and included a list of fungi in his *Huddersfield, its History and Natural History*. *J. Bot.* 1902: 431; *Proc. LS* 1902-3: 30-1; *D*: 312 (*BB*: 150).

HOFFMAN (George Henry; 1805-82), surgeon by profession, was born at Margate. He investigated vine mildew (*Gardeners' Chronicle*, 1848: 700) and grew *Mucor* on onions *ibid.* 1882 1: 540). *D*: 313 (*BB*: 150).

HOGG (Jabez; 1817-99), ophthalmic surgeon, microscopist, and author. Writings include: *The Microscope*, 1854 (edn 15, 1899) - the most famous - and *Skin Diseases, an Inquiry into their Parasitic Origin ...*, 1873 - a reprint of previously published papers arguing against the parasitic origin of disease. *DNB* 2: 2430; *BMJ* 1899 1: 1067; *Lancet* 1899 1: 1263-4.

HOGG (John; 1800-69) classical scholar and naturalist, was born and died at Norton, Co. Durham. He was called to the bar in 1832, travelled widely in southern Europe, and his natural history interests were diverse - his publications covering

plants, birds, and fish. In *On the Natural History of the Vicinity of Stockton-on-Tees*, 1827, he noticed both the lichens and fungi (pp. 68-9) of the region. *DNB I*: 984-5; *Proc. LS 1869-70*: c-ci; *D*: 313 (*BB*: 151).

HOGG (Robert; 1818-97), FLS (1861), LLD, after graduating from Edinburgh became a horticultural writer. The author (with **G. W. Johnson**) of *Eatable Fungusses of Great Britain*, 24 pl., 1866. See also **H. G. Bull**. *Proc. LS 1896-7*: 57-8; *SC 2*: 251; *D*: 313 (*BB*: 151).

HOGSON (Arthur Salisbury; d. 1934), headmaster of Pentre Secondary School, Cardiff, (1914-32), had mycological interests, especially myxomycetes. *D*: 312.

HOLL (Harvey Buchanan; 1820-86), MD (Aberdeen), lichenologist, was a civil surgeon in the Crimea and died at Cheltenham. He was an able lichenologist and made extensive collections (now at BM) but published little except additions to the lichens of the Malvern Hills (*Trans. Malv. Nat. Fld Club 3*: 119-29, 1870). He corresponded with **E. M. Holmes**. *Hawksworth & Seaward (1977)*: 24; *D*: 315 (*BB*:151).

HOLMES (Edward Morell; 1843-1934), pharmacist (pharmacognosist) and botanist lectured on botany at Westminster Hospital Medical School (1873-6), and on materia medica to the British Pharmaceutical Society (1887-90). He was curator of the Pharmaceutical Society's Museum (1872-1922). He specialized in lichens and marine algae and listed the lichens and fungi of Bedfordshire (1904), Cornwall (1906), Devonshire (1906), Dorset (c. 1906; unpublished ms. at BM(NH)), Kent (1908), Somerset (1906), Surrey (1902) for the *Victoria History of the Counties of England*.

With **P. Gray** wrote *British Fungi, Lichens, and Mosses. Including Scale Mosses and Liverworts*, 1886 (edn 2, 1907). See C. Abbott, also **H. B. Holl**. *Proc. LS 1930-31*: 177-9; *Linnean 5*: 23-30, port., 1989 (correspondence); *Hawksworth & Seaward (1977)*: 19(port.), 23-4, 25, 96-7 (bibl.); *SC 2*: 260; *D*: 315.

HOOKE (Robert; 1635-1703) was curator of experiments to the Royal Society (1662) and later (1677-82) secretary. John Aubrey in his *Brief Lives* writes: 'Mr Robert Hooke ... was born at Freshwater in the Isle of Wight; his father was minister there ... When his father died, his son Robert was but thirteen years old, to whom he left one hundred pounds, which was sent to London with him, with an intention to have him bound apprentice to Mr Lilly, the paynter, with whom he was a little while on tryall; who liked him very well, but Mr Hooke quickly perceived what was to be done, so, thought he, "Why cannot I do this by my selfe and keep my hundred pounds?" ... He went to Mr Bushby's, the schoolmaster of Westminster, at whose howse he was: and he made very much of him. With him he lodged his hundred pounds. There he learned to play 20 lessons on the organ. There in one weeke's time made himself master of the first VI bookes of *Euclid* ... He was sent to Christ Church in Oxford ... He was there assistant to Dr Thomas Willis in his chymistry; who afterwards recommended him to the honble Robert Boyle to be useful to him in his chymical operations. Mr Robert Boyle recommended Mr

Robert Hooke to the Curator of the Experiment of the Royall Societie, wherein he did an admirable good work to the Commonwealth of Learning, in recommending the fittest person in the world to them.'

And of his appearance John Aubrey writes: 'He is but of midling stature, something crooked, pale faced, and his face but a little below, but his head is lardge, his eie full and popping, and not quick; a grey eie. He haz a delicate head of haire, browne, and of an excellent moist curle.'

Hooke is famous for his *Micrographia*, 1665, plate 1 of which gives the first illustrations of microfungi - *Mucor* and rose rust (*Phragmidium mucronatum*). R. W. T. Gunther, *Life and Work of Robert Hooke*, 3 vol., 1930-38; Margaret 'Espinasse, *Robert Hooke*, 1956 (London), G. Keynes, *A Bibliography of Dr Robert Hooke*, 1960 (Oxford); *DNB 1*: 999; *DSB 6*: 481-8; *D*: 317 (*BB*: 152).

HOOKER (Sir Joseph Dalton; 1817-1911), MD (Glasgow, 1839), FLS (1842), FRS (1847), was the younger son of **W. J. Hooker** who, in 1865, succeeded his father as director of the Royal Botanic Gardens, Kew. Hooker was a prolific writer and compulsive traveller. His contribution to mycology was not extensive but the fungi he collected during his travels in the Himalayas during 1847-50 (see his *Himalayan Journals*, 2 vols., 1854) were identified by **M. J. Berkeley**. *DNB 2*: 2702; *DSB 6*: 492-5; W. B. Turrell, *Joseph Dalton Hooker. Botanist, Explorer, Administrator*, 1963; *SC 2*: 267; *D*: 318 (*BB*: 152) 1.

HOOKER (Sir William Jackson; 1785-1865). b. Norwich, (married **Dawson Turner's** daughter); professor of botany at Glasgow University (1820-41); first director of the Royal Botanic Gardens, Kew (1841-65); d. Kew. Hooker was not a mycologist but he had a long term interest in fungi. He induced **M. J. Berkeley** to write the volume on fungi for J. E. Smith's *English Flora*, 1836, (when he made his mycological herbarium available to Berkeley) and later Berkeley dealt with much mycological material sent to Kew for identification. He corresponded with **R. K. Greville**, **D. Carmichael**, and a number of other mycologists. See also **C. Babbington**, **W. Bonner**, **J. D. Hooker**, **J. Klotsch**. *DNB 1*: 1001; *DSB 6*: 488-92; F. O. Bower in *Oliver (1913)*: 126-50; *SC 2*: 283; *D*: 319 (*BB*: 153).

HOPE (John; 1725-86), MD (Glasgow, 1750), FRS (1767), became professor of botany and materia medica at Edinburgh University in 1761 (from 1768 Regius Professor of medicine and botany) and started the Edinburgh Botanic Garden. In his handwritten 'List of plants growing in the neighbourhood of Edinburgh collected in flower in 1765 as a sketch of the Calendarium Florae of Edinburgh' (now at the Edinburgh Botanic Garden), nineteen fungi are mentioned of which ten are agarics or boleti (Watling (1986): 2, 28). *DNB 1*: 1003; *D*: 320 (*BB*: 153).

HOPKINS (John Collier Fredrick; 1898-1981). After serving in the 1914-18 war, finally in the Royal Air Force, Hopkins was awarded a Colonial Agricultural Scholarship which culminated in a year at the Imperial College of Tropical Agriculture, Trinidad.

After two years as an agriculture officer in Uganda he was, in 1926, appointed as mycologist in Southern Rhodesia where he remained for the next 28 years (from 1946 as Chief Botanist and Plant Pathologist) publishing more than a hundred papers on diseases of tobacco and other tropical crops. In 1954 he returned to England as Assistant Director of the Commonwealth Mycological Institute, Kew, and two years later succeeded **S.P. Wiltshire** as Director. On retirement in 1964 he moved to Hastings, then the Isle of Man where he collected fungi. Hopkins' *Tobacco Diseases with Special Reference to Africa*, 1956, which became a standard text for the region, was published by the Institute where one of his innovations as Director was to instal a bacteriologist (A. C. Hayward) for plant pathogenic bacteria. Hopkins travelled widely and was in much demand, in 1963 returning to Salisbury as co-chairman of the pathology section of the 3rd World Tobacco Scientific Congress arranged by the Tobacco Research Board of Rhodesia and Nyasaland. In 1962 he was appointed a Companion of the Order of St Michael and St George. *WWW*.

HOPKINSON (John; 1844-1919), London piano maker, was president of the Hertfordshire Natural History Society, 1893. He contributed Hertfordshire lichens to the *Victoria History of the Counties of England*, 1902. *D: 321*.

HOPKIRK (Thomas; 1785-1841) was a Glasgow business man. His *Flora Glottiana*,

Figure 16. John Collier Fredrick Hopkins (1898-1981)

1813, lists 100 fungi (including 43 agarics and boleti) found in Clydeside. *DNB I: 1004; Ramsbottom (1963): 163; Watling (1986): 3; SC 2: 303; D: 321 (BB: 154).*

HORA (Frederick Bayard; 1908-84), born at Hove, Sussex, went to a London school and after attending evening classes at Birkbeck College (under Dame **Helen Gwynne-Vaughan** for botany) gained a Marshall's Exhibition and entered New College, Oxford (1928), graduated with first class honours, and was awarded a D.Phil. in 1936 for his research on plant physiology.

Hora worked as a professional botanist throughout his career - first at the Imperial Forestry Institute, Oxford, and from 1941 at the University of Reading as lecturer (from 1964 reader) teaching plant physiology and biochemistry. A sideline, on which he became an international authority, was his interest in agarics and other larger fungi. He was a persistent collector. Served as Foray Secretary and later President (1958) of the British Mycological Society and wrote *A Field Guide to 400 Common Mushrooms and Toadstools*, 1950, which was much appreciated. Later, with Morten Lange, *Collin's Guide to Mushrooms and Toadstools*, 1963, appeared. Hora was in much demand as a leader of fungus forays. He was an outgoing friendly man, a capable organist, and a good cook. See also **W. H. Wilkins**. *Times 19 April 1984; TBMS 84: 1-2, port., 1985.*

HORTON-SMITH (Clifford; 1901-86), avian pathologist (specialized in coccidiosis and other parasitic diseases of poultry), served in the navy during the 1914-18 war, graduated from Manchester University, and then taught for a time in London. In 1957 he joined the Central Veterinary Laboratory at Weybridge where he studied coccidiosis and in 1948 (with R. E. Gordon) founded the Houghton Poultry Research Station at Huntington and after his retirement in 1965 worked for FAO in the Middle East. His many interests included mycotic diseases of poultry. *Times 20 June 1986.*

HORWOOD (Arthur Reginald; 1879-1937), sub-curator of the Leicester Museum, 1902-22, founded the Lichen Exchange Club which ran from 1907 to 1914 and (in 1913) issued A. R. Horwood, *A Handlist of the Lichens of Great Britain, Ireland, and the Channel Islands* for the Lichen Exchange Club. (See also **T. Hebdén, H. P. Reader**.) Horwood also contributed the lichens of Leicestershire (1907) to the *Victoria History of the Counties of England. Hawksworth & Seaward (1977) 26-7; SC 2: 337; D: 323.*

HOUGHTON (Rev. William; 1829-95), MA (Oxon., 1853), FLS (1859), schoolmaster, then rector of Preston, Wellington, Shropshire, is still remembered for his paper 'Notices of Fungi in Greek and Latin authors' (*Ann. Mag. nat. Hist.* 1885: 22-49, 153-4) which has been much consulted. *D: 324.*

HOW (William; 1620-56), a London physician and botanist, in his *Phytologia Britannica*, 1650, listed five lichens. *DNB I: 1020; Hawksworth & Seaward (1977): 2; D: 324 (BB: 156).*

HOWARD (Sir Albert; 1873-1947) plant pathologist and economic botanist, graduated at Cambridge (St John's College), 1898. After a year as lecturer in agricultural science in the Barbados became acting mycologist and agricultural lecturer in the

Department of Agriculture, West Indies, where he worked on diseases of cacao and sugar cane (1899-1900). After spending 1903-5 as head of the botany department of Wye College, Kent, he held posts in economic botany in India from 1905-31 when he returned to England. He was knighted in 1947. *Nature* **160**: 742, 1947; *WWW (1941-50)*: 566-7; *D*: 325.

HOWARD (Henry James; 1884-1957), FLS, FRMS, FRPS, born at Lowestoft, Norfolk, was a self-taught naturalist. After taking a teacher training course he set himself up at the Castle Museum, Norwich, where the City Council sent classes from all the city schools to be taught the rudiments of biology. He also gave classes in zoology for medical students studying for the 1st MB.

Although an expert general naturalist, Howard's particular interest was Myxomycetes (the subject of his presidential address to the Norfolk & Norwich Naturalists' Society) on which he became an international authority. He was a friend of Miss **G. Lister** who left him her personal collections of myxomycetes together with related papers. Howard's collection of myxomycetes is at the Castle Museum, Norwich. He was a keen and expert photographer.

HOWITT (Godfrey; 1800-7), MD (Edinburgh), practised at Leicester and Nottingham. Author of *Flora of Nottingham*, 1839, to which **J. Bohler** is thought to have contributed the lichens. *D*: 326 (*BB*: 157).

HUDSON (William; 1730-93), FRS (1761), FLS (1791), born and educated at Kendal, Westmorland, was apprenticed to an apothecary in London where he subsequently practised. His *Flora Anglica*, 1762 (edn 2, 1778; edn 3 (reprint of edn 2), 1798) includes fungi and lists 87 species of lichens in one genus *Lichen*, with localized records. *DBN 1*: 1025; *SC 2*: 354; *D*: 327 (*BB*: 157)

HUGHES (G. C.), of Bicester, Oxon., joined the BMS in 1898 as a Foundation member. He bequeathed his mycological books to the Society's Library and his drawings of Oxfordshire fungi are at the Royal Botanic Gardens, Kew (box 161).

HUMPHREY [also Humfrey] (William; before 1792) of Norwich, a friend of **J. E. Smith**, discovered *Battarea phalloides* nr Bungay, ca 1782 - a first record published by **T. J. Woodward** (1784). *G. J. Cooke (1935)*: 194; *D*: 329 (*BB*: 159).

HURST (Cecil Prescott; d. 1956), FLS (1928), naturalist and field botanist, first lived in the Isle of Wight, then, with his two sisters, at Great Bedwyn, Wilts, and finally, from 1930, at Saltash, Cornwall. He published on the lichens of Wiltshire (see Hawksworth & Seaward (1977): 29, 99(bibl.)) and on rusts but his work with this group was limited by his reluctance to use the microscope. Hurst was an active member of the Wiltshire Archaeological & Natural History Society and was a bachelor. 'In the field at all seasons he was seldom seen without an overcoat and he always carried an umbrella and a newspaper. The last served two purposes: to read while waiting for infrequent local trains and to wrap specimens.' *Proc. LS 1956-7*: 242-3; *D*: 332.

HUSSEY (Mrs A. M. (née Reed); fl. 1820-77), the wife of Dr Thomas John Hussey of Hayes, Kent, is noted for *Illustrations of British Mycology*, 1847-55, in two quarto

volumes with 140 beautiful hand-coloured lithographs. *Hussea* Berk. (1847). *SC* 2: 376; *D*: 332 (*BB*: 160).

HUTCHINSON (Claude Mackenzie; 1869-1941), graduated from Cambridge. He was mycologist (plant pathologist) to the Indian Tea Association, Assam (1904-9) then bacteriologist at the Agricultural Institute, Poona (1909-26). *Nature* 148: 367, 1941; *D*: 333.

HUTCHINSON (Sir Jonathan: 1820-1913), see Swanton, E. W.

HUXLEY (Thomas Henry; 1825-95), zoologist, protagonist of evolution, and prolific writer, was from 1854-85 professor of natural history at the Royal School of Mines, South Kensington, London. He made two contributions to mycology. In 1882 as one of Her Majesty's Inspectors of Fisheries he published a paper on salmon disease caused by *Saprolegnia* (*Quart. J. Microscop. Soc.* NS 22: 311-32) and, more interestingly, in a long overlooked letter dated 15 November 1875 to the physicist John Tyndall (then working at the Royal Institution) Huxley described an experiment he had made from which he concluded that bacteria could not grow in a culture contaminated by *Penicillium* (see J. Friday, *Brit. J. Hist. Sci.* 7: 61-71, 1974). See also **W. Roberts**. *DNB* 2: 2433; *DSB* 6: 589-97; *Proc. RS* 59: xlvi-lxxi, port., 1896; *L. Huxley, The Life and Letters of T.H. Huxley, 2 vols, 1900; D*: 334 (*BB*: 162).

HYDE (Harold Augustus; 1892-1973), PhD, FLS, botanist and mycologist, graduated from Cambridge University (Downing College) and after teaching posts in schools at Birmingham, Stamford, and Tonbridge (interrupted by military service, 1918-9 was appointed keeper of botany at the National Museum of Wales, Cardiff, and held this post until his retirement in 1962. Hyde acted as an honorary lecturer in economic botany at University College, Cardiff, and was also a public lecturer and broadcaster, while under his keepership the National Welsh Herbarium was greatly expanded. He wrote a book on Welsh ferns but became known internationally for his investigations on the pollen and fungus spore content of the atmosphere (see *Clin. Allergy* 2: 153-79, 1972; ca 200 refs). In 1941 he began the first day to day survey of atmospheric pollen and spores (see *Atlas of Airborne Pollen Grains*, 1958 (with K. F. Adams). In this work he collaborated with **D. A. Williams** of the Asthma & Allergy Unit at St. David's Hospital, Cardiff, of which on his retirement from the Museum Hyde became honorary research associate. *Watsonia* 10: 113-4, 1974; *SC* 2: 381; *D*: 335.

I

INGRAM (John Thornton; 1899-1972) after serving in the Artists' Rifles during the 1914-18 war, qualified in medicine from the London Hospital. During 1927-59 he was physician in charge of the Dermatological Department of the General Infirmary, Leeds, and then (1959-65) the first holder of a newly created chair of dermatology at the University of Durham (Newcastle-upon-Tyne) and physician

at the Royal Victoria Infirmary, Newcastle. He was instrumental in the appointment of **C. J. La Touche** to Leeds. Ingram was chairman of the Medical Research Council's Medical Mycology Committee, 1959-69. *BMJ* 1972 **3**: 54, *port.*, 119; *Lancet* 1972 **2**: 93-4, *port.*; *Brit. J. Derm.* **87**: 512-3, 1972.

ISAAC (Ivor; 1915-78), plant pathologist and mycologist, was born in Swansea and graduated with first class honours from Swansea University College in 1937.

He trained as a school teacher and after teaching in Ipswich for a year studied for a PhD at Cambridge (where he captained the University soccer team) investigating *Verticillium* wilt of sainfoin under **F. T. Brooks** and this gave him a life-long interest in *Verticillium*. He next studied *Verticillium* wilt of hops at East Malling Research Station (1942-5) and in 1947 was appointed senior lecturer in biology at Acton Technical College (later Brunel University) and then from 1950 lecturer in botany at Swansea where he later (1969) held the first Personal Chair to be established at that College. He gained an international reputation for his researches on *Verticillium* and played a leading part in establishing the first International Conference on *Verticillium*. *Times* 15 August 1978; *FBPP News* No. 2: 85, 1979; *Bull. BMS* **13**: 156, 1979.

IVIMEY-COOK (Walter Robert; 1901-53), mycologist and botanist, was educated at Dulwich College and graduated from King's College, London. He was successively demonstrator at King's College (1923-8), lecturer in botany at Bristol University (1928-31), and senior lecturer at University College, Cardiff. He wrote *The Inter-relationships of the Archimycetes*, 1929, a biology text for medical students (with C. C. Hentschel) in 1932, and four botanical books with R. C. McLean. *Nature* **169**: 993, 1952; *Proc. LS* **164**: 283-4, 1953; *D*: 146.

J

JENNER (Edward; 1803-72), a self-taught botanist and entomologist, was for 47 years a traveller to the printing house of Baxter of Lewes, Sussex. He wrote *A Flora of Tunbridge Wells*, 1845, which includes lichens and fungi. *DNB* **1**: 1075; *D*: 344 (*BB*: 166).

JENNINGS (Richard Douglas; 1935-89) after joining the British Mycological Society in 1967 became a keen, regular, and popular attender at Society forays where he developed his enthusiasm for fungi. After a period of farming, Jennings joined the Nature Conservancy Council and became a dedicated worker in the cause of conservation.

In 1969 he energized the British Conservation Corps which became the nationwide British Trust for Conservation Volunteers. In 1985 he became Reserves Manager of the Dorset Trust for Conservation. This experience he put at the disposal of the various Committees of the Society on which he served. A memorial day foray was held at Lower Kingcombe, Dorset, on 3 November 1990 (see *Mycologist* **5**: 100, 1991). *Mycologist* **4** (2): 99, *port.*, 1990.

- JERDON** (Archibald; 1819-74), naturalist, a native of Roxburghshire, was a tax collector. He also collected fungi and summarized his published and unpublished finds in *Proc. Berwicks. Nat. Club* for 1863. He corresponded with **M. J. Berkeley** and a number of his specimens are included in Berkeley & Broome's *Notices of British Fungi*. An unpublished manuscript on hymenomycetes and letters are at the Natural History Museum. *Ramsbottom* (1963): 170; *D*: 345 (*BB*: 166).
- JINKS** (John Leonard; 1929-87), CBE, FRS, geneticist, was born at Stoke-on-Trent and graduated with first class honours in botany from Birmingham University in 1950 when he was awarded the Sidgwick Memorial Prize. After studies abroad he joined the Agricultural Research Council's biometrical genetics unit at Birmingham and in 1965 the University appointed him professor of genetics. Jinks was a member of the Science Research Council (1975-9) and after 1979 much involved with the ARC, serving as secretary and deputy chairman from 1985. Jinks specialized in biometrical genetics but he also had a long term interest in fungi, especially the part asexual and sexual reproduction play in adaption to the environment, and extrachromosomal inheritance (see *The Fungi* 2, chap. 19, 1966). *Biog. RS* 34: 321, port., bibl., 1988; *Times* 13 June, 1987.
- JOHNSON** (Charles; 1791-1880), FLS (1824), a London physician, was lecturer at St John's Hospital, 1830-73. Author of *British Poisonous Plants*, 1856 (edn 2, 1861, with his son **C. P. Johnson**) which includes coloured plates of the principal poisonous fungi. *DNB* 1: 1086; *SC* 2: 448; *D*: 346 (*BB*: 166).
- JOHNSON** (Charles Pierpoint; d. 1893), see **C. Johnson**. *SC* 2: 449; *D*: 346 (*BB*: 167).
- JOHNSON** (George William; 1802-86), FLS (1830), (b. Blackheath; d. Croydon), was a writer on gardening. He qualified as a barrister and during 1839-42 was professor of moral and political economy at Hindoo College, Calcutta. Johnson was the author of many books including *The Potato Murrain and its Remedy*, 1846. See also **R. Hogg**, **M. Plues**. *DNB* 1: 1087; *D*: 346 (*BB*: 167).
- JOHNSON** (Thomas; 1597-1644), born Selby, Yorks., was a London apothecary and a Royalist colonel during the Civil War. He died from a shot wound while defending Basing House in Hampshire. He brought out a 'very much enlarged and amended' edition of **John Gerard's** *Herball* in 1633. *DNB* 1: 1090; *Arber* (1938): 134-5; *D*: 346 (*BB*: 167).
- JOHNSON** (Thomas; 1863-1954), a Lincolnshire man, was in 1890 appointed professor of botany at the Royal College of Science, Dublin, and also keeper of the botanical collection of the Science and Art Museum. In 1900 his department was merged with the Department of Agriculture and Technical Instruction when Johnson became Technical Adviser to the Department of Agriculture and he set up the Dublin Seed Testing Station, the first official such Station in the British Isles. His work marked the beginning of the Department of Agriculture's advisory service and he initiated appropriate action on the introduction of gooseberry mildew (*Sphaerotheca mors-uvae*) into the British Isles (Co. Arklow) in 1900 and the introduction of wart disease of potato into Ireland (1908). He retired in 1928

after the Royal College of Science had been incorporated in University College, Dublin, but remained active and developed an interest in fossil fungi from coal measures at Washing Bay, Co. Tyrone. *McKay (1951): 11-13, port., 27 (bibl); Muskett (1976): 400-1; D: 347.*

JOHNSON (Rev. William; 1844-1919), lichenologist, was a Primitive Methodist minister who became principal of Hartley Theological College, Manchester. Best known for his *North of England Lichen Herbarium*, 1894-1914 which was issued in 13 fascicles comprising 520 comprehensively labelled specimens. His lichen herbarium is at Leeds University. *Hawksworth & Seaward (1977): 24, 215; Gilbert (1980): 336-7, port.; SC 2: 450; Seaward (1987): 45; D: 347.*

JOHNSTON (George; 1797-1855), MD (Edinb., 1817), surgeon, was born at Simprim, Berwickshire, and from 1819 in practice at Berwick. He was a versatile naturalist and wrote pamphlets and books on cholera, British zoophytes, molluscs, sponges and other topics and was a founder of the Ray Society and the Berwickshire Naturalists' Club (1831) and also an editor of the *Magazine of Zoology and Botany* (= *Annals and Magazine of Natural History*). He was three times mayor of Berwick. Johnston was a capable botanist, specialized on fungi, and was a correspondent of **M. J. Berkeley**. In 1829-31 he published *A Flora of Berwick-on-Tweed* (in 2 vol., 12mo), with illustrations by his wife, which includes lists of lichens and fungi, and in 1853 *The Botany of the Eastern Borders* of which one section is devoted to fungi; the species being grouped according to habitat. His lichen herbarium is at Edinburgh (see *Notes R. Bot. Gard. Edinb.* **37**: 381-5, 1979). See also **E. Bell**. *DNB I: 1091; Ramsbottom (1963): 168-9; Lichenologist 12: 333-5, 1980; D: 347 (BB: 168).*

JOHNSTON (James Finlay Weir; 1796-1855), MA (Glasgow), FRS (1837), was a chemist, best remembered for two books *Catechism of Agricultural Chemistry*, 1844 (of which there were 33 editions during the author's lifetime) and *The Chemistry of Common Life*, 2 vol., 1853-5, became reader in chemistry and mineralogy at Durham University in 1833. In 1843 he was appointed chemist to the Agricultural Society of Scotland and wrote *Potato Disease: Being the Results of Investigations into its Nature and Origin*, 1845-46. *DNB I: 1091; D: 348 (BB: 168).*

JOHNSTONE (R. B.; 1856-1934) collected gasteromycete records for **G. F. Scott Eliot** *et al.*, *Fauna, Flora and Geology of the Clyde Area*, 1901. *D: 349.*

JONES (Arthur Coppen; 1866-1901), FLS (1891), bacteriologist, pupil of **T. H. Huxley**, translated A. Fischer's *Structure and Function of Bacteria*, 1900. *J. Bot. 1901: 191; D: 349 (BB: 169).*

JONES (Arthur Mowbray; 1826-89), a soldier (retired as colonel of the West York Militia, 1882), pteridologist, and lichenologist. His lichens are at the National Museum, Dublin. *D: 349 (BB: 169).*

JONES (Daniel Angell; 1861-1936), bryologist, was a schoolmaster at Machynlleth (1886-92) and Harlech (1892-1924) and published a list of the lichens of Ingleton, Yorks. (*Naturalist*, 1925). *D: 349.*

JONES (George Howard; d. 1945), plant pathologist. After holding a commission in the Royal Engineers (1917-9) he graduated from Cambridge (Downing College) in 1921. He then studied gooseberry mildew in East Sussex under **V. H. Blackman** with a Ministry of Agriculture research grant (1923-4) before serving as mycologist to the Department of Agriculture, Nigeria (1924-9) when he specialized in diseases of cotton. He was then chief mycologist to the Ministry of Agriculture, Egypt, for ten years when he resigned and returned to England. In 1941 he again joined the army and was killed in an air crash on a flight from Cairo. *D: 349*.

JONES (Rev. John Pike; 1790-1857), BA (Cantab., 1813), curate of North Bovey, Devon (1816-31), and subsequently vicar of Alton, Staffs., studied and published on the flora of Devon. His (with **J. F. Kingston**) *Flora Devonensis*, 1829 includes both lichens and fungi. *DNB I: 1097; D: 350 (BB: 169)*.

JONES (Robert C. Fowler; 1873-1951) was an architect by profession and a stamp-collecting bachelor. He collected fungi 'because he liked the look of them' and was an active member of the Yorkshire Naturalists' Union and had a natural social charm. He financed the publication of **F. A. Mason** and **J. Grainger's** *A Catalogue of Yorkshire Fungi*, 1937, distributed complimentary copies, and bequeathed £500 to the Union, half of it earmarked for the use of the Mycological Committee. *Naturalist 1952: 129; Blackwell (1961): 64; D: 351*.

JONES (Theobald; 1790-1868), served in the Royal Navy (1803-65), becoming Admiral. As a lichenologist contributed papers to the *Proc. Dublin Nat. Hist. Soc.*, 1863-5. *D: 351 (BB: 169)*.

JONES, Mrs W. Neilson, see Rayner, M. M. C.

JOSHUA (William; 1828-98), FLS (1877), Gloucestershire lichenologist and algologist. With the assistance of **E. M. Holmes** issued a set of 48 microscope slides of lichens as *Microscopic Slides of British Lichens*, 1879 (Cirencester). *SC 2: 463; D: 351 (BB: 170)*.

K

KEARNS (Howard George Henry; 1902-86), OBE (1954), was appointed lecturer in entomology at Bristol University in 1926 and five years later joined the Long Ashton Research Station where he became professor of agricultural and horticultural science (1957-67) and director of the Station. Although orientated towards the control of pests Kearns had a broad approach to problems of crop protection and the improvement of spraying machinery. He was joint editor of the *Journal of Horticultural Science* from 1960 until his death. *Times 19 July 1986*.

KEITH (Rev. James; 1825-1905) graduated from King's College, Aberdeen, and then, while school teaching, qualified himself for the ministry. From 1852 he was Minister at Forres. His many records of fungi, covering 300 agarics and their allies, were summarized by P. Leslie in J. J. Burgess, *Flora of Moray*, 1935.

Ramsbottom (1963): 172; D: 354 (BB: 171).

KEYWORTH (William Graham, 1914-75), plant pathologist, was born in Sheffield and graduated with first class honours from the Imperial College of Science in 1936. He next gained a PhD for work under **W. Brown** on diseases of carnations and the physiology of basidiomycetes (1938). During 1938-52 Keyworth worked at East Malling Research Station on *Verticillium* wilt and virus diseases of hops (especially nettlehead). He spent 1950-1 in Connecticut with J. G. Horsfall and was in 1952 appointed plant pathologist at the National Vegetable Research Station, Wellesbourne, where he became Deputy Director in 1967. He held offices in the Association of Applied Biologists (president), British Mycological Society, and the Institute of Biology (of which he was a founder member), and devoted spare time to the Marriage Guidance Council and Citizen's Advice Bureau. *Times* 27 Aug. 1975.

KIDD (Franklin; 1890-1974), DSc (Lond.), FRS (1944), CBE (1950), microbiologist, graduated from Cambridge (St John's College), married **Mary Nest Owen** (1920), and was head of the Ditton Laboratory, East Malling (a branch of the Low Temperature Research Station, Cambridge), 1934-47 and subsequently director of the Food Investigation Department of the Department of Scientific and Industrial Research, 1947-57. He investigated the storage of fruit, especially apples. *Biogr. R.S. 21: 407-30, port., bibl., 1975; WWW (1971-80): 434.*

KING (Thomas; 1834-96), professor of botany, Anderson College, Glasgow, edited the 4th (memorial) edition of **R. Henedy's** *Clydesdale Flora*, 1878, and though primarily an algologist had a keen interest in fungi (fide Watling (1986): 8). *D: 360 (BB: 174).*

KIPPIST (Richard; 1812-82), botanist, was paid librarian of the Linnean Society of London, 1842-80. He made the first British record of *Clathrus cancellatus* (*C. ruber*) (*Phytologist* 3: 1070-1, 1850). *DNB I: 1139; Proc. LS 1881-82: 64-5; D: 361 (BB: 174).*

KINGSTON (John Filmore; - before 1850), Devonshire botanist, see **J. P. Jones**. *D: 361 (BB: 174).*

KIRBY (William; 1789-1850), BA (Cantab., 1781), FLS (1796), FRS (1818), entomologist and botanist, was in 1782 appointed rector of Barham, Suffolk, where he lived for the rest of his life. Kirby wrote on diverse entomological and natural history topics and among his contributions to the *Transaction of the Linnean Society* (5: 112-5, 1800) was an account of fungi parasitic on wheat. *DNB I: 1139; D: 361 (BB: 175).*

KLOTZSCH (Johann Friedrich; 1805-60), botanist and mycologist, who had studied pharmacy and botany in Berlin, was during 1830-32 curator of **W. J. Hooker's** herbarium at Glasgow University and was virtually the founder of the mycological section (now at Kew) which was made available to **M. J. Berkeley** when compiling his 1836 census of British fungi. Klotzsch made extensive collections of Scottish fungi and after returning to Germany (where he finally became curator of the Royal Herbarium, Berlin) published an account of J.

Sowerby' fungi and those of the Linnean collection (Ramsbottom (1963): 167). Among the larger fungi Klotzsch was the first to recognize (see (Watling (1986): 5) was the common larch bolete *Suillus grevillei* (Klotzsch) Singer (syn. *Boletus elegans*). *SC 2*: 569.

KNIGHT (Charles; c. 1818-95), MRCS (1840), FRCS (1869), FLS (1857), born and educated in England and emigrated to New Zealand about 1852 where he became auditor general and died. He collected and published papers on the lichens of Australia and N.Z. His lichen specimens are at **BM**. *Knightiella* Mull. Arg. (1886) (Lecanorales). *SC 2*: 576; *D*: 363 (*BB*: 176).

KNIGHT (Henry Herbert; 1862-1944), mathematics master at Llandovery School (1888-1907), then retired to Cheltenham. He was president of the British Bryological Society (1933-4) and between 1921 and 1935 reported on the lichens recorded at many British Mycological Society forays (*TBMS 7-20*). His lichens are at the National Museum of Wales. *D*: 363.

KNIGHT (Robert Lanier; -1972) was on the staff of the Empire Growing Corporation and in the Sudan (1929) investigated disease resistant cottons. After returning to England in 1954 he was on the staff of East Malling Research Station. *Nature 236*: 316, 1972; *D*: 364.

KNIGHT (Thomas Andrew; 1759-1839), FRS (1805), FLS (1807), horticulturalist, president of the Horticultural Society of London, 1811-38, lived in Herefordshire and London. graduated from Oxford (Balliol College) and was a friend of Sir **Joseph Banks**. He used flowers of sulphur against pear scab (1814) and narrowly missed forestalling Mendel (see Ainsworth, 1981). *DNB 1*: 1144; *DSB 7*: 408-10; *SC 2*: 577; *D*: 364 (*BB*: 176).

KNOWLES (John; 1781-1841), became chief clerk in the Surveyor's Department of the Navy Office, biographer of Fuseli, author of *An inquiry into the means which have been taken to preserve the British Navy from the earliest period to the present time, particularly from that species of decay now denominated Dry Rot*, 1821. Cf. **G. Birkbeck**, **W. Chapman**, **R. Dickson**, **M. Faraday**. *DNB 1*: 1148.

KNOWLES (Matilda Cullen; 1864-1933) from 1907-33 worked as 'temporary assistant' at the National Museum of Ireland. Noted for her 'Lichens of Ireland', *Proc. R. Irish Acad. B* 1929: 179-434. *SC 2*: 583; *D*: 365.

L

LACEY (Margaret Sowerby), BSc (1914), MSc (1927, Lond.), DSc, during 1920-1 was a Ministry of Agriculture Research Scholar at the Imperial College of Science, London, where she became a research assistant in the Bacteriology Department (under **S. G. Paine**), 1921-38, and then the Botany Department (under **W. Brown**). She published on bacterial diseases of legumes, potato, and other crop plants.

LAFFERTY (Henry Aloysius; 1891-1954) graduated from the Albert Agricultural

College and the Royal College of Science, Dublin. Appointed assistant to **G. H. Pethybridge** in 1912, he became Junior Agricultural Instructor in 1921, and two years later was appointed Head of the Seed Testing and Economic Botany Division of the Department of Agriculture for Ireland when his career as a plant pathologist virtually ended. Up to 1923 Lafferty published many papers on the results of his own investigations and of collaboration with Pethybridge and others - diseases of potato and flax being prominent components of his work. *McKay (1951): 17-8, port., 27; Muskett (1976): 403; D: 367.*

LAMB (Ivan Mackenzie (Elke Mackenzie Lamb); 1911-90), lichenologist (algologist, photographer), born in London, graduated from Edinburgh University (BSc (1933), DSc (1943) for a monograph of *Placopsis*). From 1935-46 he was assistant in charge of lichens at the Natural History Museum, London, made an expedition to the Falkland Islands and Antarctica, and in 1947 was appointed professor of cryptogams at Tucumán University.

In 1950 he became curator of cryptogams at the Canadian National Museum, Ottawa, and was finally Director of the Farlow Herbarium, Harvard University (1954-74). Noted for his studies on *Stereocaulon*, he was the author of *Index Nominum Lichenum*, 1932-60. His diary is deposited at the headquarters of the British Antarctic Survey, Cambridge. *Independent 5 March 1990; Lichenologist 23: 85-7, port., 1991; Bryologist 94: 315-20, 1991; SC 2: 735.*

LANE, L., see Clarke, L. L.

LARBALESTIER (Charles du Bois; 1838-1911), lichenologist, of Jersey, Channel Islands, and Cambridge. He collected in Ireland, the Channel Islands, and Cambridge and issued series of exsiccati: *Lichenes Caesariensis et Sargiensis Exsiccati*, 6 fasc., 1-280, 1867-72; *Lichen-Herbarium*, 9 fasc., 1-360, 1879-81; *Lichenes Exsiccati Circa Cantabrigiam Collecti a C. du Bois Larbalestier, M.A.*, 1-35, 1986. His herbarium is at Birmingham. *Hawksworth & Seaward (1977): 20, 21, 108, 211, 215, 217; SC 2: 759; D: 371 (BB: 180).*

LARGE (Ernest Charles; 1902-76), plant pathologist, was a man of parts. Born in London, during 1918-24 he was apprenticed to Gwynnes Ltd, hydraulic and general engineers of Hammersmith and took a London Honours degree in engineering by attending evening classes. He also studied botany and plant pathology at Chelsea Polytechnic as an evening student. After holding engineering posts in London and South Wales Large became manager of the colloidal products business of Electro-Chemical Processes Ltd of North Acton which sold Buisol and Sulsol. On the business being taken over by Boots Ltd., Large acted as consultant to Boots for two years and during that time and the following year or two wrote two novels - *Sugar in the Air*, 1937 (based on his experience with Buisol, and which was recommended by the Book Society) and *Asleep in the Afternoon*, 1938 - and also *The Advance of the Fungi*, 1940 - his much appreciated history of plant pathology. He also patented a copper fungicide. 1940-1 was spent at the Felstead Sugar Beet Factory. Next he served for five years as assistant mycologist to A. Beaumont at Seale Hayne Agricultural College in

Devon. This was followed by four years as assistant advisory plant pathologist in the Eastern Province (based on Kirton, Lincs.) when he was transferred to the Ministry's Plant Pathology Laboratory at Harpenden, to promote and co-ordinate work on plant disease assessment (see **A. Cox**) and to edit the new journal *Plant Pathology*, where he stayed until his retirement in 1963.

He wrote a third novel - *Dawn in Andromeda* (1956) and after retirement visited Australia (where he was for six months visiting professor at Sydney) and New Zealand. He was awarded the OBE (1963) and was president of the British Mycological Society (1960) which elected him to Honorary Membership (1972). Through his interest in agarics he became a skilful watercolourist and some of his drawings of larger fungi were published in **W. P. K. Findlay's** *Wayside and Woodland Fungi*, 1967. *TBMS* 69: 167-70, *port.*, 1977.

LARTER (Clara Ethelinda; 1847-1936), a Devon amateur botanist, was born in Leeds, Yorks., moved to Torquay, Devon, about 1857 and subsequently lived for a time at Coombe Martin. She had a special knowledge of mosses, liverworts, and marine algae and contributed to the county lichen records (see Hawksworth & Seaward (1977): 108). Miss Larter joined the Devonshire Association in 1906 and was for 1930-36 chairman of the Botanical Section and she was editor-in-chief of the Association's *Flora of Devon*. She was also chairman of the Botanical Section of the Torquay Natural History Society. She died in Torquay. *Proc. LS* 1936-7: 200-2; *SC* 2: 761; *D*: 371.

LASKY (Captain James; *fl.* late 1700s) of Crediton, Devon, found an agaric at Crediton on 9 Oct. 1797. He sent a coloured drawing to **J. E. Smith** who identified the fungus as *Agaricus coccineus* Bulliard (syn. *A. rubens*) (*Hygrocybe chlorophana*). *Linnean* 8: 8-10, 1 *fig.*, 1992.

LA TOUCHE (Charles John (Patrick Dignes de); 1904-81) was born in China, returned to Europe by the Trans-Siberian railway, went to school in France and England, and graduated in science from Dublin in 1924. He then worked as mycologist at St Mary's Hospital, London, under John Freeman who was then interested in allergy induced by house dust and fungal spores and it was a spore from one of La Touche's cultures which contaminated the bacterial culture in **Alexander Fleming's** laboratory on the floor above and led to the discovery of penicillin. Then for a period he was mycologist to the Mushroom Growers' Association after which, wishing to take up medical mycology, La Touche qualified himself in medicine in Dublin in 1946. The next year he was appointed senior lecturer in medical mycology at the University of Leeds under **J. T. Ingram**. La Touche published on a variety of mycological topics and at Leeds studied the role of infected cats in outbreaks of *Microsporum canis* ringworm in both children and adults. He was president of the British Society for Mycopathology for 1960. *Sabouraudia* 19: 164, 1981.

LAUNDON (Geoffrey Frank (from 22 Jan. 1977 Gillian Fiona); 1938-84), the brother of J. R. Laundon (lichenologist at the Natural History Museum), was born at Kettering, Northants, and graduated from the University of Leicester. In 1959 he

became an assistant mycologist at the Commonwealth Mycological Institute and specialized on the Uredinales, publishing the results of his investigations in a series of *Mycological Papers* (Nos **84, 91, 99, 102**, 1963-5) and in the *TBMS* (**46, 47, 50, 58, 61, 67**, 1963-76). In 1965 he emigrated to New Zealand and became mycologist at the Plant Diagnostic Station at Levin in the North Island where, among others, he maintained his interest in the taxonomy and nomenclature of rusts. *Taxon* **34**: 186-7, 1985.

LAURENCE (Rev. John; 1668-1732), rector of Bishop's Wearmouth, Durham (1722-32) was the author of *Clergy-man's Recreation*, 1714. in which he described how normal jasmin may be variegated by bud grafting from a 'striped' plant although he did not appreciate that a virus was involved. *D*: 372.

LAWES (Sir John Bennet; 1814-1900), FRS (1854), agriculturalist, founded Rothamsted Experimental Station on his estate at Harpenden, Herts, where he undertook agricultural experiments with **J. H. Gilbert**. *DNB* **2**: 2438; *D*: 373.

LAWSON (John; fl. 1828-39), of Elgin, published 'On the structure of smut-balls in wheat', *Quart. J. Agric. (Edinburgh)* **9**: 269-72, 1838. *BB*: 182.

LEACH (Robert; d. 1980), BA (Cantab.), AICTA, plant pathologist, mycologist (plant pathologist) Nyassaland (1930-8), assistant advisory mycologist (plant pathologist), Cambridge (1938-9), plant pathologist Jamaica (1940), ARC grant to investigate chocolate spot at Cambridge (1943), advised Camerouns on banana diseases (1953), returned to Jamaica (*ca* 1955), retired to Granchester (1967).

LECHMERE (Arthur Eckley; 1885-1919), plant pathologist, was born at Fownhope, Herefs., and after the death of his parents began training as an engineer at University College, Bristol, but changed to natural science (under J. H. Priestley) and gained a BSc (Lond.) 1909, and the next year BSc (Bristol).

He then studied mycology in Paris under Mangin and subsequently was granted a Board of Agriculture Research Scholarship and studied at Paris (where he was awarded a DSc), London (Imperial College of Science) and Munich (under von Tubeuf) when he was appointed mycologist at Long Ashton Research Station but in September 1914 he was trapped in Germany and interned for the duration of the war, first in the salt mines of Bavaria, then Ruhleben, where he developed a school of biology. In 1918 he started work at Long Ashton but in Feb. 1919 he died suddenly following a chill. *Kew Bull.* 1919: 164-7, 167-8.

LEES (Edwin; 1800-87) was a printer and stationer of Worcester who retired from business *ca* 1840 to devote himself to botany and natural history. He founded the Worcester Literary and Scientific Institute in 1829 and was elected FLS in 1835. His *Botany of the Malvern Hills in the Counties of Worcester, Hereford and Gloucester*, 1868, includes both fungi and lichens. In 1842 (*Phytologist* **1**: 97) he noted 'a hirsutire that appears to be a byssoid fungus' on *Monotropa hypopitys* (cf. **T. G. Rylands, G. Graves**). *DNB* **1**: 1192; *M. M. Jones, The Lookers-out of Worcestershire. A memoir of Edwin Lees ...*, 1980; *SC* **2**: 812; *D*: 380 (*BB*: 184).

LEES (Frederick Arnold; 1847-1921), MRCS (1871), FLS (1872), was born and died at Leeds, Yorks. He founded the Botanical Record Club in 1873 and in his flora of

West Yorkshire (*Trans. Yorks. Nat. Union*, ser. Bot., 2: 631-660, 806-11, 1888) and *History, Gazetteer and Directory of the County of Lincolnshire*, 1892: 37-63, listed lichens. The Yorkshire list of ca 260 species includes records by **J. Dalton**. *Seaward (1987): 40; SC 2: 813; D: 380 (BB: 185).*

LEIGHTON (Rev. William Allport; 1805-89), lichenologist of Shrewsbury, a hotel keeper's son, was at school with **C. Darwin** and graduated from Cambridge (St. John's College) in 1833; FLS, 1865. He published extensively on British lichens and made use of spore characters. Wrote *The British Species of Angiocarpous Lichens, Elucidated by their Sporidia*, 1851, but his magnum opus was *The Lichen-flora of Great Britain, Ireland and the Channel Islands*, 1871 (edn 3, 1879), describing some 781 species, which became a standard text. He sent specimens to W. Nylander and made English translations of many of Nylander's papers which included British species. See also **M. M. Atwood, T. Salwey, J. Stirton, G. H. K. Thwaites**. *DNB 1: 1196; Hawksworth & Seaward (1977): 17, 19 (port.), 21, 110-12 (bibl.), 219; SC 2: 827; D: 381 (BB: 185).*

LESLIE, P., see Keith, J.

LESLIE-ROBERTS (Hugh; 1860-1949). Dermatologist at the Royal Infirmary Liverpool. His MD thesis submitted to the University of Edinburgh was published separately as *Introduction to the Study of Mould-fungi Parasitic on Man*, 1893 (Liverpool) and he maintained an interest in dermatophytes for some years. *BMJ 1949 2: 657; Brit. J. Derm. 61: 428, 1949.*

LETT (Rev. Henry William; 1838-1920) Rector of Aghaderg, Loughbrickland, Co. Down, Canon of Dromore, listed 582 species of fungi of the North of Ireland (*Proc. Belfast Naturalists' Field Club, Appendix*, 1884-5). He was also a member of the Royal Irish Academy. Canon Lett conducted the First Irish Fungus Foray which was arranged by the Belfast Naturalists' Field Club at Shane's Castle, Co. Antrim, 18 September 1883 (for a photograph see Muskett (1976), plate XV). *J. Bot. 1921: 75-6; Hassell (1957): 119; D: 383 (BB: 186).*

LEWTON-BRAIN (Lawrence; 1879-1922), plant pathologist and agriculturist, graduated (1898) from Cambridge (St John's College) where he was demonstrator in botany (1900). In 1902 he succeeded **A. Howard** as mycologist and agricultural lecturer in the Imperial Department of Agriculture of the West Indies where his interests included diseases of cacao, sugar cane, and cotton. He became assistant director (1905), then director (1907) of the Hawaiian Sugar Planters' Experiment Station and soon abandoned mycology for an administrative career which he completed as director of the Department of Agriculture of the Federated Malay States from 1905 where he succeeded Gallagher (see **J. B. Carruthers, A. Ley**). He died at Kuala Lumpur. *WW (1916-28): 629; D: 384.*

LEY (Rev. Augustin; 1842-1911) was born at Hereford. His father was headmaster of the Cathedral School and later vicar of Sellack with King's Capel on opposite sides of the river Wye near Ross. After graduating from Oxford (Christ Church College) and ordination in 1867 Ley returned to Sellack where he worked for the next thirty years as curate and then, as successor to his father, vicar. With **W.H.**

Purchase he published *A Flora of Herefordshire*, 1889, which includes fungi. *J. Bot.* 1911: 201-6, port.; *D*: 384 (*BB*: 187).

LEYLAND (Roberts; 1784-1847), lichenologist, was a printer of Halifax. His collection of lichens, at one time in the Belle Vue Museum, Halifax, is now destroyed. *D*: 385 (*BB*: 187)

LIGHTFOOT (Rev. John; 1735-88), an English naturalist, was born in Gloucestershire, graduated from Oxford (Pembroke College) in 1756, entered the church, and took up botany and conchology. He made an important contribution to Scottish mycology as a result of an invitation to accompany the zoologist Thomas Pennant on a tour of Scotland in 1722. The 2-volume *Flora Scotica*, 1777, in which cryptogams are emphasized, lists 23 species of fungi, and 103 lichens are recognized.

LINDSAY (William Lauder; 1829-80), MD (Edinb., 1852), FLS (1858), lichenologist, was physician at Murray's Royal Institution for the Insane at Perth. He was interested in lichens as a source of dyes and in addition to a number of articles wrote *A Popular History of British Lichens*, 1856, with coloured illustrations, which was influential. His lichens are at Edinburgh (**E**). *DNB* 1: 1222; *Nature* 23: 131, 1881; *Hawksworth & Seaward* (1977) 15-16, port., 113-4, bibl.; *SC* 3: 63; *D*: 387 (*BB*: 189).

LINTON (Rev. Edward Francis; 1848-1928), MA (Oxon.), FLS (1914), was rector of Edmondsham, Dorset, 1901-20, and published a list of the fungi of East Dorset (*J. Bot.* 53: 313-21, 345-53, 1915). *D*: 387.

LIPSCOME (Rev. Christopher; 1781-1843) 'Bishop of Jamaica'. Supposed to have collected fungi and lichens (fide *D*: 358).

LISTER (Arthur; 1830-1908), of an intellectual Quaker stock, was the fourth and youngest son of **J. J. Lister** (1786-1869) and brother to **J. Lister** the surgeon. Like his father, Arthur was a London wine merchant, and having a life-long interest in natural history on retirement in his fifty-seventh year took up the study of myxomycetes. After a hesitant start he applied himself to the group with vigour, and accompanied by his daughter **G. Lister** (q.v.) (as amanuensis and artist, though no mean draughtsman himself) he worked over the collections of myxomycetes at the British Museum (Natural History), the Royal Botanic Gardens, Kew, and the Paris Natural History Museum, as well as de Bary's collections at the University of Strasburg, and as a result the first edition of his *Monograph of the Mycetozoa* appeared in 1894 under the imprint of the British Museum (Natural History).

He was elected FRS in 1898 and was president of the British Mycological Society for 1906. *DNB* 2: 2574; *Proc. RS.*; *SC* 3: 118; *D*: 388 (*BB*: 189).

LISTER (Gulielma; 1860-1949), the third daughter of **Arthur Lister** (q.v.) was born and died at 871 High Road Leytonstone, Essex, and who for forty years after her father's death, extended his studies on myxomycetes. She was responsible for the second edition of the 'Monograph' (1911) and the enlarged third edition (1925), which were lavishly illustrated in colour due to her generosity.

During her life time she was virtually the honorary curator of the British Museum collection of myxomycetes and she became an international authority on the group with correspondents (including the Emperor of Japan) in many countries. The day to day progress of her father's and her own studies on myxomycetes are detailed in a series of 74 manuscript notebooks - now owned by the British Mycological Society but on loan to the Natural History Museum (see *TBMS* **35**: 188, 1952). Miss Lister bequeathed her personal collections of myxomycetes to **H. J. Howard** of Norwich (q.v.). Miss Lister had many calls on her artistic ability illustrating her cousin F. J. Hanbury's *Monograph of the British Hieracia*, 1889-98, and also Dallimore & Jackson's *Handbook of the Coniferae*, 1923. She was an expert naturalist with a detailed field knowledge of both flora and fauna, and an active member of the Essex Field Club, the Nature Study Union, the Linnean Society, and the British Mycological Society (of which she was twice president, 1912, 1932). *TBMS* **33**: 165-6, *port.*, 1950; **35**: 188, 1952 (*notebooks*); *Nature* **188**: 362-3, 1960; *SC* **3**: 120; *D*: 388.

LISTER (Joseph (Lord Lister); 1827-1912), FRS (1860; president, 1895-1900), son of **J. S. Lister** (1786-1869) and brother of **A. Lister** was a Quaker. He is noted for the introduction of antiseptics into surgery. According to his Notebooks, on 21 November 1871 he observed the antibacterial effects of *Penicillium glaucum* on bacteria (**J. Tyndall**, *Essays on the Floating Matter in the Air ...*, 1881; 109) which is possibly the first observation of this phenomenon. See **T. H. Huxley**, **W. Roberts**. *DNB* **2**: 2754-5; *DSB* **8**: 399-413; *R. J. Godlee, Lord Lister, 1917*; *R. B. Fisher, Joseph Lister, 1827-1912, 1977*; *D*: 388.

LISTER (Joseph Jackson; 1786-1869), FRS, father of **J. Lister** and **A. Lister**, was a Quaker. From the age of fifteen he helped his father who was in the London wine trade. A student of optics and microscopy, he is noted for devising a combination of two compound achromatic lenses to overcome spherical and chromatic aberration in microscope objectives. *DNB* **1**: 1225; *DSB* **8**: 413-5.

LISTER (Joseph Jackson; 1857-1927), FRS (1900), son of **Arthur Lister**, brother of **Gulielma Lister**, zoologist, Fellow of St John's College, Cambridge, contributed the entry on Mycetozoa to *Encyclopaedia Britannica* edn 11, **19**: 105-10, 1911. *Proc. RS* **102**: *i-v, port.*, 1928; *Times* 7 Feb. 1927; *D*: 388.

LISTER (Martin; 1639-1712), MD (Oxon.), FRS, practised medicine in York and later became physician to Queen Anne. He sent specimens of fungi to **John Ray**. *DSB* **8**: 415-7; *Blackwell (1961)*: 53; *D*: 388 (*BB*: 190).

LOUGHNANE (James B ; 1905-70), was born at Crinkle, nr Birn, Co. Offaly, graduated from University College, Dublin, in 1928 and, except for 1928-9 when he taught at Cappoquin, Co. Waterford, spent his life in the service of University College. In 1929 he was appointed assistant to **P. A. Murphy** and worked on virus diseases, used a travelling scholarship to study entomology at Cambridge, and gained the degree of MSc in zoology from the National University of Ireland. In 1959 he succeeded **Robert McKay** as professor of plant pathology when he published on fungus diseases of potato, flax, cereals, and sugarbeet. His studies on

insect transmission of virus diseases were many and diverse but he will always be remembered as the instigator and first president of the Society of Irish Plant Pathologists founded in January 1968. *Bull. BMS* 5: 29, 1971; *Muskett* (1976): 406, 407; *D*: 395.

LOUSLEY (Job Edward; 1907-76), an expert amateur botanist, was employed by Barclays Bank. He served as president of the South London Botanical Institute the Botanical Society of the British Isles, and the London Natural History Society. He wrote or edited a number of botanical books and published a preliminary account of the fungi of Limpsfield Common, Surrey (*Naturalist* 1937: 55-8, 1938). *Times* 6 Jan. 1976; *SC* 3: 174; *D*: 375.

LYELL (Charles; 1767-1849), MA Cantab. (1794), FLS (1813), botanist (and student of Dante) of Kinnordy, Forfarshire, contributed lichens to **J. Sowerby** & **J. E. Smith**, *English Botany. DNB* 1: 1259; *D*: 399 (*BB*: 195).

LYON (George Jasper; 1816-*ca* 1862), of Glasgow and Moffat, was a lichenologist and bryologist. His lichens, mosses, and drawings are at the Natural History Museum (**BM**). *BB*: 196.

M

McALPINE (Daniel; 1848-1932), plant pathologist and mycologist, was born in Ayrshire and studied biology under **T. H. Huxley** and botany under **Thiselton-Dyer** at the Royal College of Science. He became lecturer at the Heriot Watt College, Edinburgh (1877) and in 1884 lecturer in biology at Melbourne University, Australia. In 1890 McAlpine was appointed vegetable pathologist in the Department of Agriculture (which was the first whole-time appointment to a permanent post in applied mycology in Government service in any Commonwealth country). McAlpine published extensively on Australian fungi (e.g. *The Rust Fungi of ...*, 1906; *The Smut Fungi of Australia ...*, 1910) and plant diseases. He died at Litchville, Victoria. *SC* 3: 207; *D*: 402.

McANDREW (James; 1836-1917), naturalist (bryologist), was headmaster of Kells parish school. He published a list of the lichens of Dumfriesshire, etc. *Hawksworth & Seaward* (1977): 29, 115-6 (*biobl.*); *SC* 3: 208; *D*: 402.

McARDLE (David; 1849-1934), the son of P. McArdle (1808-83; foreman at the Botanic Gardens, Glasnevin (1831-68)), became plant collector and clerk at Glasnevin (1869-1923). His 'Contribution to the natural history of Lambay, Co. Dublin' (*Irish Naturalist* 16: 106, 1907) included a list of fungi and he also published a number of new Irish mycological records (see *Muskett* (1977): 436-8, 452). *SC* 3: 208; *D*: 402.

McBAIN (Alan Matthew; *ca* 1902-36), BSc (Glasgow), was assistant, virus disease investigations, at the Scottish Society for Research in Plant Breeding, 1930-36. *Nature* 137: 217, 1936; *D*: 403.

McFADYEAN (Sir John; 1853-1941), veterinarian, bacteriologist, pathologist,

virologist, and microscopist, b. Wigtown, Galloway, the son of a farmer, became the most prominent British veterinarian of his time. He qualified as a veterinarian and also in medicine, because the veterinary course was deficient in bacteriology and pathology, and founded, funded, and edited *The Journal of Comparative Pathology and Therapeutics* for 40 years (1888-1928). After a post at the Edinburgh Veterinary School he went to London in 1892 as the first professor of bacteriology and pathology at the London Veterinary College of which he became Dean and was Principal (1894-1927). McFadyean was a prolific writer. Author of *The Anatomy of the Horse; a Dissection Guide*, (edn 3, 1940), he demonstrated that African horse sickness was caused by a virus and is renowned for his use of tuberculin for the diagnosis of tuberculosis and his studies on the latter disease which established that bovine tuberculosis is transmissible to man. He also published on actinomycosis. McFadyean was knighted in 1905. *Lancet* 1941 **I**: 298, *port.*; *BMJ* 1941 **I**: 259; *I. Pattison, John McFadyean: A Great British Veterinarian*, 240 pp., 1981 (London).

MACGARROCH (James Burgess; 1765-82), lichenologist, son of **J. Burgess** (q.v.). *D*: 405 (*BB*: 55,198).

McINTOSH (Charles; 1839-1922) was a postman at Inver, near Dunkeld, Perthshire, for 32 years and for most of that time walked his 16-mile daily round. He became interested in natural history (especially fungi and mosses) and also antiquities. Encouraged by **F. Buchanan White**, who proposed McIntosh as a special 'associate' member of the Perthshire Society for Natural History, he exhibited local fungi at the meetings of the Cryptogamic Society of Scotland at Perth (in 1875) and Dunkeld (1877) and his many collections included 4 new species of fungi and 13 first British records (published by **J. Menzies**, **Carlton Rea**, **F. B. White**, and others). During recent years there has been a renewed interest in Charles McIntosh because of his association with **Beatrix Potter** which began during the 13 successive summer holidays spent by the Potter family near Dunkeld. McIntosh sent specimens to Beatrix Potter, in London, who made watercolour drawings and gave some to McIntosh in return. The Potter-McIntosh correspondence has been published by Mary Noble (*Notes Roy. Bot. Gdn Edinb.* **44**: 607-27, 1987) who also lists (with modern names) the 24 Potter drawings of fungi now in the Perth Museum & Art Gallery which also possesses McIntosh's copy of **Stevenson's** *Hymenomyces Britannici*. *British Fungi (Hymenomyces)*, 1886, which was a gift to him by Beatrix Potter's father, Rupert Potter. *H. Coates, A Perthshire Naturalist*, 1923; *Ramsbottom* (1963): 177; *M. A. Taylor & R. H. Roger, A Fascinating Acquaintance: Charles McIntosh and Beatrix Potter*, 28 pp., 1989 (Perth Museum & Art Gallery); *J. Taylor, Beatrice Potter. Artist, Storyteller & Countrywoman*, 1986: 60, *port.* (ex Perth Museum); *D*: 407 (*BB*: 199).

McIVOR (William Graham; fl.1840s-1876), Irish by birth, was a Kew gardener who emigrated to Madras in 1848 and acclimatised cinchona in India. His collections of Yorkshire lichens are at the National Botanic Gardens, Glasnevin Dublin (see

Seaward, *Naturalist* **101**: 125-8, 1976). *SC* **3**: 224; *D*: 407 (*BB*: 199).

McKAY (James Townsend; ca 1775-1862), botanist, born Kirkaldy, Fife, trained as a gardener, and went to Ireland in 1803 where he was the founder and curator of Trinity College, Dublin, Botanic Garden. His *Flora Hibernica*, 1836, included the first major listing of Irish lichens (fide Hawksworth & Seaward (1977): 15). *DNB* **1**: 1280; *SC* **3**: 225; *D*: 407-8 (*BB*: 199).

McKAY (Robert; 1889-1964) studied at Albert College and graduated from the Royal College of Science, Dublin. He served in the RAMC (Ulster Division) throughout the First World War and saw active service in France. In 1923 he was appointed to the Royal College of Science as assistant to **P. A. Murphy** who, in 1938, he succeeded as Head of the Plant Pathology Department; a post he held until his retirement in 1959. McKay made multifarious investigations - diseases of potato and flax being given prominence. He is also remembered for a notable series of handbooks on diseases of different plants. The first, on diseases of flax (1947) was followed by others on diseases of tomatoes, sugar beet, potatoes, crucifers, cereals, and onions (1949-59).

Like Pethybridge and Murphy, he was awarded the Boyle Medal by the Royal Dublin Society (1957). *Nature* **203**: 124, 1964; *News Bull. BMS* **23**: 31, 1965; *Muskett* (1976): 404; *D*: 408.

MacLEAY (William Sharp; 1792-1865), BA (Cantab., 1814), MA (1818), FLS (1821), b. London, d. Sydney, Australia, was the author of 'On the identity of certain general laws which have been lately observed to regulate the natural distribution of insects and fungi' (*Trans. Linn. Soc.* **14**: 46-65, 1825). He emigrated to New South Wales in 1839. *DNB* **1**: 1287; *D*: 410.

MacLEOD (John Macleod Hendrie; 1870-1954), London dermatologist (associated with St John's and Charing Cross Hospitals), who used an X-ray epilation apparatus, designed by A. C. Dean (who subsequently died from X-ray injuries), now in the Wellcome Museum for the History of Medicine. Author of *Diseases of the Skin*, 1920 (2nd issue 1933) and, with **I. Muende**, *Practical Handbook of the Pathology of the Skin*, 1940. *BMJ* 1954 **2**: 1488-9; *Lancet* 1954 **2**: 1289-90, *port.*; *Brit. J. Derm.* **50**: 492, *port.*, 1938; **67**: 114-5, 1955.

McNAB (William Ramsey; 1844-89) was born in Edinburgh where his father and grandfather were successively curators of the Botanic Garden. He became assistant to Professor **J. H. Balfour**, studied in Berlin, and qualified in medicine at Edinburgh in 1866. After a period as professor of natural history at the Royal Agricultural College, Cirencester, he was professor of botany at the Royal College of Science, Dublin, (from 1872 until his death), and made occasional contributions to Irish mycology (see Muskett (1976): 431 (54)). *DNB* **1**: 1289; *Proc. LS* 1888-90: 97-8; *SC* **3**: 231; *D*: 412 (*BB*: 202).

McRAE (William; 1878-1952), MA, DSc (Edinb.), FRSE (1936), CIE (1934), plant pathologist, was a student at Edinburgh University and Munich and after acting as a demonstrator at the Royal College of Science was appointed to the Indian Agricultural Service in 1908, and posted to the Agricultural Research Institute at

Pusa, but in 1910 was transferred to the newly created post of Government Mycologist in Madras where among other topics he investigated blister blight of tea. In 1920 he moved back to Pusa to succeed **E. J. Butler** as Imperial Mycologist, a post he held to 1924. His research covered diverse aspects of tropical plant pathology, including wilt disease of pigeon-pea and sugar-cane mosaic. *Nature* **170**: 561, 1952; *WWW (1961-60)*: 721; *D*: 414.

McWEENEY (Edmund Joseph; 1864-1925), a medically qualified Dublin man, became (in 1891) professor of pathology at the Catholic University School of Medicine and, on the establishment of the University of Ireland, at University College, Dublin. During 1894-1900 he was also lecturer in bacteriology and natural history at the Albert Institution, Glasnevin, where **T. Carroll** introduced him to fungal diseases of potato. In 1895 he made the first Irish record of *Phoma betae* (on mangolds) and he distinguished the two sclerotium diseases of potato - stalk disease (*Sclerotium sclerotiorum*) and grey mould (*Botrytis cinerea*). He also collaborated with **G. Pim** in general mycological studies. *McKay (1951)*: 10-11, *port.*, 28 (*bibl.*); *Muskett (1976)*: 400; *D*: 414.

MADDOX (Richard Leach; 1816-1902), a medical man (MD (Aberdeen), 1851); was a photomicrographer and published papers on *Mucor* and the cultivation of microfungi in the *Monthly Microscopical Journal* (1869: 140-7; 1870: 14-24). *D*: 415 (*BB*: 203).

MADGE (Margaret; d. 1978) graduated from the Royal Holloway College and after lecturing in science subjects at Studley Horticultural College, was, in 1930, appointed as a lecturer in the botany department of Holloway College where she later took over the mycology from Miss **E. M. Blackwell**. Dr Madge was a member of the BMS from 1948-1969. *Bull. BMS* **13** (2): 156, 1979.

MAINGAY (Albert Carroll; 1836-69), lichenologist and botanist, after qualifying for medicine at Edinburgh in 1858 joined the Indian Medical Service (1859) and subsequently worked in China (1860) and took charge of the jail at Malacca (1862-7). He was murdered in Rangoon in 1869. Part author with **W. Mudd** of *Manual of British Lichens*, 1861. *J. Bot.* 1870: 63; *D*: 416 (*BB*: 204).

MAITLAND (Thomas Douglas; b. 1885) was a member of the gardening staff at the Royal Botanic Gardens, Kew. He held appointments in Uganda, Kenya, Southern Nigeria, and finally became botanist to the Agriculture Department, Uganda. His fungal collections are at Kew. *Butler (1929)*: 16; *D*: 416.

MANN (Harold Hart; 1872-1961), DSc, FRIC, FLS, FRGS, graduated from the Yorkshire College, Leeds (which became Leeds University) and worked at the Pasteur Institute, Paris. He was chemical assistant (under J. A. Voelker) for research of the Royal Agricultural Society (1895-8), chemist at Woburn Experimental Farm of the Royal Agricultural Society (1898-1900), scientific officer to the Indian Tea Association (1900-7); principal of the Agricultural College, Poona, and agricultural chemist to the Government of Bombay (1907-18), director of agriculture, Bombay Presidency (1918-20, 1921-27), and finally assistant director of the Woburn Experimental Station (1928-56). He was

adviser on tea to several governments and wrote books on various aspects of tea (*Pests and Blights of Tea Plants*, 1898 (edn 2, 1903) (with **G. Watt**); *Blister Blight of Tea*, 1906, Indian Tea Assn. 3) and also social and economic topics. *WWW (1961-70)*: 747; *Nature* **193**: 321-2, 1962; *D*: 418.

MANSON (Sir Patrick; 1844-1922), physician and tropical parasitologist, was educated in Aberdeen where he qualified in medicine in 1865 and in 1867 was appointed medical officer to the Chinese Imperial Maritime Customs. Stationed first in Formosa then Amoy, among other investigations he elucidated in 1879 the aetiology of the tropical ringworm which he distinguished as 'tinea imbricata' although the causal dermatophyte (*Trichophyton concentricum*) was not named until 1896. In 1889 he returned to London where he specialized in tropical diseases and lectured. He was associated with the foundation of the London School of Hygiene & Tropical Medicine in 1899 which was his idea. See also **W. Dampier**. *DNB* **2**: 2780; *DSB* **9**: 81; *P. H. Manson-Bahr & A. Alcock, The Life and Work of Sir Patrick Manson, 1927*; *BMJ* 1922; **1**: 623-6, 664, 702-3, 980; *Lancet* 1922 **1**: 767-9.

MANTON (Irene; 1904-88), FRS (1961), president of the Linnean Society (1973-6), botanist, and sister of the zoologist Sidonie Manton (1902-79), FRS, graduated from Cambridge and after study in Stockholm was lecturer in botany at Manchester University until she moved to Leeds (in 1946) as professor of botany, a post she held until her retirement at 65. Famous among other topics for her studies on the cytotaxonomy of ferns Irene Manton took up electronmicroscopy and established a laboratory for the ultrastructure of plants including fungi. One notable discovery was the '9 plus 2' structure of fungal flagella (Manton *et al*, *J. Exp. Bot.* **3**: 204-15, 1952). *Biogr. RS* **35**: 249-61, port., bibl., 1990; *Independent* 13 June 1988, port.; *Linnean* **5**: 74-5, port., 1988.

MARKHAM (Roy; 1916-79), FRS, a biochemist and student of plant viruses who after graduating in biochemistry at Cambridge (Christ's College) undertook post-graduate research at Cambridge under N. W. Pirie on methods for analysing nucleoproteins. In 1940 he became assistant to **K. M. Smith**, who in 1960 he succeeded as director of what had become the ARC Virus Research Unit. Subsequently this Unit was incorporated in the reorganized John Innes Horticultural Institute at the University of East Anglia, Norwich, with Markham as director. There he developed research on the ultrastructure of viruses. *Biogr. RS* **28**: 319-45, port., bibl., 1982; *Nature* **285**: 57, 1980.

MARQUAND (Ernest David; 1848-1918), botanist, was born in Guernsey and died at Totnes, Devon. He worked over and published the Essex lichen collections by **E. G. Varenne** (*Essex. Nat.* **5**: 1-30, 1891) and listed the fungi and lichens of the Channel Islands and Essex (Ainsworth & Waterhouse (1989)): 7, 12). *Proc. LS* 1917-18: 39-40; *Hawksworth & Seaward (1977)*: 119 (bibl.); *SC* **3**: 302; *D*: 420 (*BB*: 206).

MARRIOTT (St. John; 1880-1965), of Woolwich, listed fungi, lichens, and myxomycetes in his *British Woodlands as Illustrated by Lessness Abbey Woods*,

1925: 37-50. D: 421 (BB: 206).

MARTIN (Hubert; 1899-1988). Although Martin was a chemist, every working plant pathologist and many mycologists of today have had occasion to consult *The Scientific Principles of Plant Protection* (now '*Crop Protection*', first published in 1928, which became a standard text and ran to seven editions (the last (1983) in collaboration with D. Woodcock). Martin also wrote *The Pesticide Manual*, 1968 (editions 4 and 5 with C. R. Worthing) and published many papers.

Born at Paddock Wood, Kent, Martin entered the Imperial College of Science in 1916 but his student days were interrupted by war service and he did not graduate in chemistry until 1921. He then worked for his MSc (Lond.) at Wye College where he joined the staff in 1927. In 1934 he was appointed biochemist and head of the Section of Insecticides and Fungicides at the Bristol University Agricultural and Horticultural Research Station, Long Ashton, and finally (1950-60) became the first director of the Science Service Laboratory (later Pest Research Institute) of the Canada Department of Agriculture at London, Ontario, where 'he created an Institute with an international reputation'.

He was president of the Association of Applied Biologists (1941-2) which elected him to honorary membership and helped to initiate the Agricultural Chemicals Approval Scheme for the control of proprietary brands of pesticides in the U.K. which culminated in the statutory regulations embodied in the Pesticide Control Act of 1988. *Ann. Appl. Biol.* **115**: 191-3, port., 1989.

MARTINDALE (Joseph Antony; 1837-1914), schoolmaster, and lichenologist, president of the Kendal Natural History Society (1912), contributed lichens of Westmorland to the *Victoria History of the Counties of England* (?1906, manuscript in the Natural History Museum). His lichens are at Kendal Museum. *Hawksworth & Seaward* (1977): 24, 25, 120 (bibl.); *SC* 3: 322; D: 424 (BB: 208).

MARTYN (Eldred Bridgeman; 1903-90), MA (Oxon.), MA (Cantab.), AICTA (1928), tropical plant pathologist, on leaving Marlborough College, graduated in honours botany from Oriel College, Oxford. After research at the Imperial College of Science he was awarded a Colonial Agricultural Scholarship and in 1928 was posted as botanist and mycologist to British Guiana. From 1940-50 he was plant pathologist in Jamaica and for his last three years in the Colonial Service plant pathologist in Trinidad. After a year in a contract-post with the Gold Coast Department of Agriculture Martyn joined the editorial staff of the Commonwealth Mycological Institute, Kew, in 1955, where he edited the *Distribution Maps* and revised and supplemented the Institute's *List of Names of Plant Viruses*, 1968; retiring in 1973. *Independent* 11 October 1990.

MARTYN (John; 1699-1768), was medically qualified and after practising in London became professor of botany at the University of Cambridge (1732-62) but after 1735 ceased to lecture. He appears to have been the first to record abnormal fruit-bodies of larger fungi when growing in the dark (see *Phil. Trans.* **43**: 263-4, 1745 - *Polyporus squamosus* on an elm log in a London cellar). T. Martin (1735-1825), the Cambridge botanist, was his son. (Author of *Historia Plantarum*

Rariorum, 1728-37 (58 drawings; originals at the Royal Society). See also **R. M. Massey**. *DNB 1*: 1333; *SC 3*: 341; *D*: 424 (*BB*: 208).

MARTYN, T., see **Martyn, J.**, above.

MASON (Edmund William; 1890-1975) was educated at Oundle School and St. John's College, Cambridge, acquiring a degree in botany in 1912 and later a diploma in agriculture. At the outbreak of the 1914-18 war he was commissioned in the Northumberland Fusiliers and was severely wounded in the battle of the Somme, 1916. On recovery he was attached to the Durham Light Infantry. From 1919 to 1921 he worked for an MSc at the University of Birmingham when his interest in fungi was aroused and in 1921 he was appointed to the Imperial Bureau of Mycology as its first mycologist and remained there until his retirement in 1960. In contrast to his colleague **G. R. Bisby**, Mason had great difficulty in bringing any project to conclusion. His mycological publications are therefore not extensive but they are well written and have been very influential. His re-arrangement of the Institute's herbarium set a new standard for mycological herbaria and he is noted for the developments he initiated in hyphomycete taxonomy and for his interest in pyrenomycetes. In the words of M. B. Ellis (Mason's successor at CMI) and S. J. Hughes (of Ottawa, who Mason trained) - two mycologists who developed Mason's ideas - Mason was 'a great man who did as much for mycology as anybody in this century'. He was an assiduous collector and was usually accompanied in the field by his wife, **Una Mason**, who served a term as Foray Secretary of the British Mycological Society. Mason received a number of honours: OBE, president of the British Mycological Society (1939) and the Yorkshire Naturalists' Union (1953), Linnean Gold Medal (1961). *Bull. BMS 9*: 114, 1975; *TBMS 66*: 371-2, *port.*, 1976.

MASON (Francis Archibald; *ca* 1878-1936), a chemist, Director of the Biological Laboratories of Murphy & Co of Headingley, Leeds, was appointed recorder of the Mycological Committee of the Yorkshire Naturalists' Union on the death of **A. Clarke** and he provided the inspiration for the 1937 *Catalogue of Yorkshire Fungi* which he compiled with **J. Grainger**. *Naturalist 1936*: 133-4, *port.*; *Blackwell (1961)*: 64; *SC 3*: 349; *D*: 425.

MASON (Mrs Una; d. 1974), the wife of **E. W. Mason**, was of Swedish parentage and from 1922 an active member of the British Mycological Society which she served as Foray Secretary (1943-4) and as Vice-President (1945). *Picture Post 29*(5): 22, *port.*, 1945.

MASSE (George Edward; 1850-1917), who succeeded **M. C. Cooke** as Principal Assistant (Cryptogams) at the Royal Botanic Gardens, Kew, in 1893, was the last to be appointed to this important mycological post without a formal training in mycology.

Born in Scampston, E. Yorks., Masee was expected to become a farmer like his father but while working on the farm collected and made drawings of wild flowers and was sent to the York School of Art where he gained the national award for drawing plants from nature. Later he spent a period at Cambridge (Downing College), but not long enough to achieve a degree, and then had the opportunity to collect orchids and botanize in the West Indies and South America.

After a short spell in the French Foreign Legion, he returned to farming,

Figure 17. George Edward Masee (1850-1917)

taught botany in various schools in Scarborough, and began to paint pictures of agarics (now at the (Natural History Museum)) which attracted the attention of **M. C. Cooke** (who subsequently used many for his *Illustrations*). In the early eighteen-nineties he was a free-lance worker at Kew and spent a year at the British Museum. On M.C. Cooke's retirement Masee was appointed in 1893 to a new post of cryptogamic botanist from which he retired in 1915 (being succeeded by **E. M. Wakefield**) and died at Sevenoaks, Kent.

His mycological writings (more than 250 publications) included: *British Fungi*, 1891 (restricted to phycomycetes and smuts), *Monograph of the Mycogastres*, 1892, *British Fungus Flora*, 4 vols, 1892-95, *Text-book of Plant Diseases*, 1899 (edn 3, 1907), *European Fungus Flora: Agaricaceae*, 1902, *Fungus Flora of Yorkshire*, 1902-5 (with **C. Crossland**), *Text Book on Fungi*, 1906, *Diseases of Cultivated Plants*, 1910, *British Fungi and Lichens*, 1911 (with illustrations by his daughter, **Ivy Masee**), and finally *Mildews, Rusts, and Smuts*,

1913 (also with **Ivy Masee**). He compiled the fungi of Surrey (1902) for the *Victoria History of the Counties of England* and the 'mycologic flora' of Kew Gardens (*J. Bot.***35**: 447, 1897; *Kew Bull.* 1897, 1906, 1909).

He had an international reputation as a mycologist and was the first president of the British Mycological Society, 1896-98 (although then, because of a difference of opinion with the secretary (**Carlton Rea**), he resigned from the Society); also chairman of the Mycological Committee of the Yorkshire Naturalists' Union, president of the Quekett Club, and honorary member of many natural history societies. His son, A. M. Masee, became entomologist at East Malling Research Station. Extroverted and impetuous, Masee tended to express opinions on topics of which he had no knowledge. **Beatrix Potter** found him 'a very pleasant kind gentleman' but the final comment may perhaps be left to **John Ramsbottom**, who knew him well, 'If he had any capacity whatever for taking pains he would have been a genius'.

Masee's private collections of fungi and drawings were bought by the New York Botanic Garden (*Mycologia* **9**: 176, 1917). See also **F. M. Burkill, E. J. Butler, W. L. W. Eyre, C. O. Farquharson, W. W. Fowler, T. Petch, A. Sharples, W. A. Thwaites, H. W. T. Wager, E. M. Wakefield**. *TBMS* **5**: 469-73, 1917; *Blackwell* (1961): 60; *SC* **3**: 359; *D*: 426; (*BB*: 209).

MASSEE (Ivy; fl. 1910), the daughter of **G. E. Masee**, collected and made watercolour drawings of larger fungi. She was an active member of the Yorkshire Naturalists' Union and served on its Mycological Committee. *Blackwell* (1961): 62; *D*: 426.

MASSEY (Richard Middleton; c. 1678-1743), FRS (1712), MD (Aberdeen, 1720), practised at Wisbech, Cambs. (1705-25) and London (1725-39). He drew a plate of fungi for **J. Martyn's** *Historia Plantarum Rariorum*, Dec. 3, 9, 1728. *D*: 426 (*BB*: 209).

MASTERS (Maxwell Tylden; 1833-1907), physician (MD, St. Andrews) was the son of W. Masters (1796-1874), a Canterbury nurseryman. He became lecturer at St. George's Hospital (1855-68), editor of the *Gardener's Chronicle* (1865-1907), as was the author of *Vegetable Teratology, an Account of the Principal Deviations from the Usual Construction of Plants*. Cf. **W. C. Worsdell** 1869 (Ray Society). *SC* **3**: 363; *D*: 427 (*BB*: 210).

MATTHEW (Patrick; ?1790-1874), of Perthshire, was the author of *On Naval Timber and Arboriculture*, 1831, which has an appendix on natural selection forestalling **C. Darwin's** views. *D. King-Hele, Erasmus Darwin, 1731-1802, 1963*: 78; *D*: 429.

MAYFIELD (Arthur; 1868-1956), FLS (1921), was born at Norwich and worked as a school teacher at Norwich and Great Yarmouth, in Norfolk, before becoming headmaster of Mendlesham school in Suffolk where he lived from 1896 and became the leading authority on Suffolk bryophytes, lichens, fungi, mycetoza, and mollusca. His collections of bryophytes, lichens, and mycetoza are at the Castle Museum, Norwich, but his microfungi (apart from examples at Kew and elsewhere) were destroyed by psocid infestation. He was a founder of the

Prehistoric Society of East Anglia. *Proc. LS* **169**: 40, 1958; *D*: 431.

MEEHAN (Thomas; 1826-1901), gardener and botanist, was born in London and after various gardening posts in England (including Kew Gardens, 1846-8), emigrated to the United States where he eventually established (with his sons) a nursery business. Lindau & Sydow (1908-17) **2**: 89, list 15 papers on various plant diseases, fairy rings, and other mycological topics which he published in America. He died at Philadelphia. *Nature* **65**: 132, 1901; *SC* **3**: 397; *D*: 432 (*BB*: 212).

MENZIES (James; 1854-1945) was a dyer's finisher from Perth. Author of 'A list of discomycetes of Perthshire' (*Proc. Perthsh. Soc. Nat. Sci.* **7**: 2-27, 1919), **C. McIntosh** being responsible for the Dunkeld records. (Ramsbottom (1963): 177). *D*: 434.

MERRETT (Christopher; 1614-95), was a London physician. His *Pinax Rerum Naturalium Britannicarum*, 1666, included 5 lichens. See also **T. Willisel**. *DNB* **1**: 1367; *D*: 435 (*BB*: 213).

METCALFE (Charles Russell; 1904-91), BA, PhD (Cantab.), FLS (1939); Botanical secretary, 1956-62; Vice-president, 1962-3; Linnean Medal, 1971), OBE (1966), botanist (plant anatomist) spent his working life at the Royal Botanic Gardens Kew, where he became Keeper of the Jodrell Laboratory (1930-69). He was noted for a series of monographs on the anatomy of dicotyledons and monocotyledons in collaboration with L. Chalk and alone. After attending Marlborough College he graduated from Cambridge (Downing College) and subsequently gained a PhD for his investigation on shab disease of lavender under **F. T. Brooks** (*TBMS* **16**: 149-76, 1931; also *J. Roy. Hort. Soc.* **65**: 271-5, 1930, and *J. Minist. Agric.* **36**: 640-5, 1929). *Independent* 15 July 1991, *port.*; *SC* **3**: 432.

MIALL (Louis Compton; 1842-1921), FRS (1892), professor of Botany, Yorkshire College of Science (which became Leeds University) wrote, with **B. Carrington**, *The Flora of the West Riding*, 1862, which includes a section on lichens (pp. 62-71) by Carrington, and published on the lichens of Malham (*Naturalist* (o.s.) **2**: 376-9, 1865). *Seaward* (1987): 44; *SC* **3**: 53; *D*: 436 (*BB*: 214).

MILLARD (Wilfred Arthur; b. 1880), BSc. DSc, plant pathologist, was lecturer in agricultural botany and forest botany at Leeds University in 1913 and from 1920-46 acted as mycologist (plant pathologist) for Yorkshire.

MILLER (Phillip; 1691-1771), the son of a Deptford market gardener, was gardener at the Apothecaries' Garden, Chelsea, 1722-70. Best known as the author of *Gardener's and Florist's Dictionary*, 1724 (and many subsequent editions and issues), in which precise details are given for mushroom growing and the collection of wild spawn. *DNB* **1**: 1378; *SC* **3**: 491; *D*: 439 (*BB*: 215).

MILLS (Frederick William; 1868-1949), FRMS (1912), FLS (1918), solicitor of Huddersfield, Yorks., and microscopist (esp. of diatoms). Author of *Photography Applied to the Microscope*, 1891. *D*: 440.

MITCHELL (Anna Helena; 1794-1882), lichenologist and algologist; b. Gothenberg, Sweden; d. Montrose, Angus. *D*: 442 (*BB*: 216).

MITCHELL, M. D., see Stelfox, M. D.

MONTAGUE (Mrs A.; d. 1953), of Crediton, Devon, joined the British Mycological Society in 1898 remained a member until her death in 1953 as the last Foundation Member.

MOORE ((Olim Muir) David; 1807-79), born in Dundee was trained as a gardener. He migrated to Dublin (1828) where he changed his name and became (in 1838) curator of the Glasnevin Botanical Gardens. His main botanical interests were in grasses and mosses but he published on disease in the potato and vine (see Muskett (1976): 430). *DNB I: 1409; D: 447 (BB: 219)*.

MOORE (Frances Joan Harvey; 1920-86), after schooling in London and Exeter, graduated in 1940 in botany from University College, London (then evacuated to Bangor, N.Wales). She then went to Rothamsted Experimental Station, Harpenden, as a voluntary worker, gained a London PhD in 1945 for work on storage diseases of potato, and in 1947 was appointed to the Ministry of Agriculture's Plant Pathology Laboratory in Harpenden as assistant to **W. C. Moore** (no relation) who she succeeded as Mycologist when he became Director of the Laboratory in 1949. In 1964 Joan succeeded **E. C. Large** as Head of the Plant Disease Assessment Section of the Laboratory and in 1973 she joined the newly formed Chief Scientist's Group at the Ministry of Agriculture and Fisheries' Headquarters in London managing state-funded research on arable crops and plant sciences. She also served on many other committees both before and after retirement in 1981 when she was awarded the OBE. Joan Moore was an active member of the Association of Applied Biologists, the Institute of Biology (of which she chaired the Agriculture Division), and the British Mycological Society (in which she held various offices, including president, 1978). She also took part in local affairs and gardening was among her many interests. She never married and lived for many years with her widowed mother. *Times 26 March 1986; Plant Pathology 35: 259-60, 1986; TBMS 89: 141-3, port., 1987*.

MOORE (Sir Fredrick William; 1857-1950), ALS (1893), FLS (1911), VMH (1897), VMM (1932), Hon.MA (Univ. Ireland), ScD (Dublin), knighted (1911), (son of **D. Moore**), succeeded his father as curator of the Royal (now National) Botanic Gardens, Glasnevin (1879-1922) from where he published on *Nectria*, myxomycetes, and other aspects of Irish mycology (see Muskett (1976): 431, 434-6, 400-1, 435). *Proc. LS 1949-50: 108-9; D: 448*.

MOORE (Mervyn Hubert; 1905-76), plant pathologist, was born at Frome, Somerset, and educated at Sexey's School, Bruton (like his brother **W. C. Moore**), Somerset Farm Institute, and University College, Reading. He spent his working life at East Malling Research Station - 1926-34 as a special assistant funded by the Ministry of Agriculture; 1934-42, mycologist in the newly established Insecticide and Fungicide Section; and 1942-66, assistant mycologist in the Plant Pathology Section. He was awarded an honorary MSc (Reading) in 1945, gained a London University PhD, 1949, and published diverse papers on the control of apple scab and other diseases of fruit. For many years he was a judge at the Imperial Fruit Show. Married **Joyce B. Hammond**, 1934.

MOORE (Walter Cecil; 1900-67) was brought up in the West Country, having been born at Frome, and was a pupil at Sexey's School, Bruton - of which another former pupil was **F. T. Brooks** under whom Moore studied at Cambridge (Trinity College, MA, 1926) and, later, collaborated in post-graduate work on silver leaf of plum. In 1925 he was appointed to the Ministry of Agriculture's Plant Pathology Laboratory at Harpenden where he stayed until his retirement in 1962, serving as director of the Laboratory from 1949 first at Milton Rd, then at the new laboratories at Hatching Green. Moore is particularly remembered for his Ministry Bulletin, *Diseases of Bulbs*, 1939, and for his most useful compilation *British Parasitic Fungi*, 1959, but he also published numerous other scientific articles. In his official capacity he served on many committees. He was chairman of the Conference of Advisory Plant Pathologists (1949-62) and also of the Scientific Subcommittee of the Advisory Committee on Pesticides, and Director of the Agricultural Chemicals Approval Scheme. He was involved in the European & Mediterranean Plant Protection Organization and helped FAO to frame the International Plant Protection Convention.

Moore was an active member of the Association of Applied Biologists and the British Mycological Society and held office (including the presidency) in both societies and was editor of the *Transaction of the British Mycological Society* (1947-52). He was known to his friends to be a man of method and his card indexes (from the varieties of bulbs in his garden to his fellow plant pathologists and mycologists) were legendary, while his knowledge of the technicalities of the prevention and control of plant diseases was unsurpassed. In recognition of his public services he was awarded the CBE in 1955. His brother, **M. H. Moore**, was a plant pathologist at East Malling Research Station. See also **C. G. Hansford**, **F. J. H. Moore**. *Times* 27 Nov. 1967; *TBMS* 52: 353-4, port., 1969; *AAB* 61: 167, port., 1968; *D*: 449.

MORGAN (George; 1860-1943), MRCS, LRCP, FRCS, who qualified in medicine from Charing Cross Hospital, went to Brighton in 1885 as house surgeon to the Royal Alexandra Hospital for Children where he later became surgeon (1895), and consulting surgeon (1919). He also became a captain in the RAMC and president of the Sussex Branch of the British Medical Association. Dr Morgan had a long term interest in natural history - especially the larger fungi. He was vice-president of the Sussex Natural History Society and was president of the Brighton & Hove Natural History and Philosophical Society for 1935-6 when his presidential address was entitled 'Fungi and finance' (see *Ann. Rep. Brighton Hove Nat. Hist. Phil. Soc.* 1936: 12-13). He joined the British Mycological Society in 1928, regularly attended autumn forays, and was a vice-president for 1933. *BMJ* 1943 2: 625.

MORRIS (Sir Daniel; 1844-1933), MA (Dublin, 1876), CMG (1893), FLS (1903), botanist, was born in Wales. From 1877-9 he was assistant at the Peradeniya Botanic Gardens, Ceylon, where he investigated the leaf disease of coffee (*Hemileia vastatrix*) (see **G. H. K. Thwaites**, **H. M. Ward**) before being

transferred to Jamaica as director of the Public Gardens where, in 1898, he became director of the first Imperial Department of Agriculture for the West Indies. *Butler (1929): 8; SC 3: 594; D: 451.*

MORRIS (L. E.) worked with **T. B. Bright** at the Shirley Institute, Manchester, during the nineteen-twenties when they are believed to have introduced **G. Smith** to mycology. In 1926 the British Cotton Industry Research Association patented Shirlan (salicylanide) for use as a preservative for cotton fabrics and in 1931 **W. F. Bewley** & O.B. Orchard (*Ann. Rep. Exp. Res. Stn Cheshunt 17: 39, 1932*) showed that a Shirlan spray successfully controlled leaf mould of tomato (*Fulvia fulva*) and other plant diseases. See also **G. R. Bates, L. D. Galloway.**

MORRISON (Robert; 1620-83), MA (Aberdeen), MD (Angers), MD (Oxon.), was the first professor of botany at the University of Oxford. In his *Plantarum Historiae Universalis Oxoniensis*, 1699, he recognized about 50 lichens arranged as 5 sections of *Muscofungus*. Some of Morrison's specimens are still at Oxford. *DNB 1: 1423; Hawksworth & Seaward (1977): 3, 5; SC 3: 587; D: 450 (BB: 221).*

MORRIS (Malcolm Alexander; 1847-1924) worked as surgeon in the Skin Department of St Mary's Hospital, London (1882-1902). He investigated ringworm and published *Ringworm in the Light of Modern Research*, 1897, illustrated by a series of his own photomicrographs. *Brit. J. Derm. 36: 139-44, port., 1924; 50: 488, port.; 515-6, port., 1938; BMJ 1924 1: 407-8, port., 504; Lancet 1924 1: 466-7, port.*

MORRISON, E. M., see Burkill, E. M.

MORTIMER (John; 1656?-1736), FRS (1705), a London merchant and writer on agriculture, in his *The Whole Art of Husbandry*, 1707 (edn 6, 1761) was one of the first to draw attention to the importance of differentiating one plant disease from another. *DNB 1: 1428; D: 452.*

MOSS (Charles Edward; 1870-1930), DSc (Manchester, 1907), FLS (1912), a Yorkshire botanist was a member of the Yorkshire Naturalists' Union. After serving as curator of the Cambridge Herbarium (1907-16), he became professor of botany at Johannesburg, South Africa (1917-30), where he died. He married the daughter of **Alfred Clarke**. *WWW (1929-4): 974; SC 3: 601; D: 453.*

MOSS (Mrs C. E. (née Clarke)), see **A. Clarke.**

MOTT (Frederick Thompson; 1825-1908) amateur botanist and wine merchant, was the author (with **E. F. Cooper, T. Carter**, and W. Cooper) of *The Flora of Leicestershire*, 1886, which includes lichens and fungi. *SC 3: 604; D: 453 (BB: 222).*

MUDD (William; 1830-79), lichenologist, was gardener at Great Ayton, Yorks., and then curator at the Cambridge Botanic Garden. His major work, *Manual of British Lichens*, 1861, ('the first reasonably comprehensive and practical British lichen flora' (fide Seaward (1987): 42) which describes 497 species, was supplemented by exsiccati. He also published *Monograph of British Cladoniae*, 1865, with specimens. See also **I. Carroll, G. Dixon, A. C. Maingay, T. Salwey.** *Hawksworth & Seaward (1973) 17-19, 221; Seaward (1987): 41-44, port.; SC 3:*

612; D: 454 (BB: 223).

MUENDE (Isaac; 1901-87), London dermatologist, qualified as an engineer before undergoing a medical training at King's College and Charing Cross Hospital supplemented by study in Paris, Vienna, and Zurich. He was associated with St John's Hospital for Diseases of the Skin, 1930-48, and became a prominent dermatologist well known for his interest in ringworm and dermatophytes. He published *Handbook of the Pathology of the Skin*, and (with **J. M. H. Macleod**) *Practical Handbook of the Pathology of the Skin*, edn 2, 1940. He was a generous bachelor and 20 years before his death set up the I. Muende Charitable Trust. *BMJ* 295: 1149, port., 1987.

MURPHY (Paul Aloysius; 1887-1938) graduated from the Albert Agricultural College and the Royal College of Science, Dublin. He first acted as technical assistant to **G. H. Pethybridge** at the Field Station at Clifden, Co. Galway, when a Development Commission Scholarship enabled him to make working visits to the Imperial College of Science, London, the Biologische Reichsanstalt, Berlin, and Cornell University, U.S.A., in the course of which he elucidated sexuality of *Phytophthora erythroseptica* (1918). After serving as plant pathologist in Prince Edward Island, Canada, where he worked on potato degeneration under **H. T. Güssow**, the Dominion Botanist, he returned to Ireland in 1920 to a post in the Department of Agriculture. In 1923 he was appointed head of the Plant Disease Division, in 1927 made head of the Department of Plant Pathology at University College, Dublin, and became the first occupant of the newly created chair of plant pathology, a position he held until his death in 1938. For his work on plant pathology Murphy was awarded the John Snell Memorial Medal by the National Institute of Agricultural Botany in 1927 and in 1933 the Boyle Medal of the Royal Dublin Society. His interests were wide but he is best remembered for his work on virus diseases of potato.

Plant virological research in Ireland was given a firm foundation by the wide ranging investigations begun by Murphy in collaboration with **Robert McKay**. In 1928 the Empire Marketing Board made a grant to University College, Dublin, to extend research on virus diseases of plants. A new building and insect-proof glasshouses were erected (the last being the first of their design in the British Isles) and in 1929 **Phyllis E. M. Clinch** (who later succeeded Professor Doyle as professor of botany at University College) was appointed to investigate cytological aspects and **James B. Loughnane** to cover the entomological; the results of these investigations are summarized by Muskett (1976): 405-10. *McKay (1951): 18-22, port., 28-9 (bibl.); Muskett (1976) 403-4; D: 457.*

MURRAY (Denis; fl.1845). At the British Association meeting at Cork in 1843, W. H. Harvey, J. D. Humphreys, & **T. Power** presented a paper 'Contributions towards a fauna and flora of the County of Cork' which was published in 1845 in the Report of that meeting. Denis Murray, gardener to Mr William M. Reeves of Vosterburgh, Co. Cork, contributed a list of 213 species of fungi to that paper and

added a few more species as an addendum while others are recorded as pencil notes in a copy of the Report at the National Museum, Dublin. *Hassell (1957): 118; Muskett (1976): 398; D: 457 (BB: 225).*

MURRAY (George Robert Milne; 1858-1911), FLS (1878), FRS (1897), was a student of A. de Bary's at Strasburg which gave him an interest in fungi. He became an assistant in the botany department of the British Museum (Natural History) in 1876 and was keeper of botany, 1895-1905. He also lectured in botany at St George's Hospital, London (1882-6), and the Royal Veterinary College (1890-5). See also **A. W. Bennett**. *DNB 2: 2807; DSB 9: 587-8; SC 3: 668; D: 457 (BB: 225).*

MURRAY (Ian Gordon; 1928-71). In the words of Helen Buckley & P. K. C. Austwick (*Lancet* 1971 **2**: 440), Ian Murray 'graduated MB, ChB at St Andrews University and was appointed house surgeon at the Dundee Royal Infirmary. In 1951 he entered the Colonial Medical Service in Ghana and later became the Medical Officer for Dunlop Plantations. In 1959 he was awarded a Research Fellowship by the Medical Research Council at the London School of Hygiene & Tropical Medicine to study mycetoma in the Sudan, and was appointed Director of the Mycological Reference Laboratory in 1961.

He was consultant in medical mycology for the World Health Organization from 1964 and a member of the Medical Mycology Committee of the MRC, also serving as secretary of the MRC Committee on Mycetoma in the Sudan. In 1968 he was elected General Secretary of the International Society for Human and Animal Mycology and took an active part in the foundation of the British Society for Mycopathology'. His research interests were mainly mycetoma and the serology of mycoses. He lectured on medical mycology to the Diploma Students courses at the LSHTM where he organized the first short public training courses on medical mycology in the UK. The British Society for Mycopathology in 1978 instituted an annual lecture in his honour. *Sabouraudia 9: 299-300, 1971.*

MUSKETT (Arthur Edmund; 1900-84) was born and educated in Norwich and leaving school in 1918 spent a short period in the Royal Air Force. He then entered the Imperial College of Science intending to read chemistry but changed to botany and after graduating was, in 1923, appointed research assistant at the Seed Testing Division of the Ministry of Agriculture of Northern Ireland and assistant in agricultural botany at Queen's University, Belfast, where he remained until his retirement in 1965 having in 1945 been appointed as the first professor of plant pathology in the Department of Mycology and Plant Pathology and served as Dean of the Faculty of Agriculture (1950-7).

While Dean he supervised a major extension of the Agriculture Building in Elmwood Avenue and the establishment of a Plant Pathology Field Station in Newforge Lane. He is particularly remembered for his work on potato blight, apple scab, leaf stripe of oats, and seed-borne diseases of flax. With J. P. Malone he devised the 'Ulster Method' for testing flax seed for seed-borne fungi and wrote *Diseases of the Flax Plant*, 1947 with J. Colhoun) and *Seed Borne Fungi*, 1964

(with J. P. Malone). He also worked with Malone on a census of Irish fungi and surveyed the history of mycology and plant pathology in Ireland (Muskett, 1976). Muskett was an active member of the British Mycological Society (president 1948) and the Institute of Biology. He encouraged local horticulture and gardening associations and initiated the competition for the Best Kept Village, and subsequently the Best Kept Small Town and Large Town. *TBMS* **84**: 575-6, *port.*, 1985; *Ann. Appl. Biol.* **107**: 353-4, 1985.

N

NATTRASS (Roland Marshall; b. 1895), BSc (Lond., 1921), PhD (Lond.), DIC, plant pathologist, was advisory mycologist at Long Ashton, 1924-7, mycologist, Plant Protection Section, Ministry of Agriculture, Egypt, 1928, then mycologist, Department of Agriculture, Nicosia, Cyprus and finally plant pathologist in Kenya.

NEEDHAM (James; 1849-1913), an iron-moulder of Hebden Bridge, Yorks., developed interests in natural history. At first he collected bryophytes. Introduced to fungi by **Charles Crossland** he became an expert collector and Hebden Bridge a *locus classicus* for British mycology. *Gnomonia needhamii* Masee & Crossland, 1904. *Blackwell* (1961): 56; *Watling* (1982): 125; *D*: 461 (*BB*: 226).

NEEDHAM (John Turberville; 1713-81), 'catholic divine and man of science', was born in London, trained for the priesthood at Douay, and then taught in France, England, and Spain. In 1767 he retired to the English seminary in Paris and devoted himself to scientific pursuits. Needham was the first English catholic cleric to be elected to the Royal Society (**45**: 615-66, 1748), in a communication to the *Philosophical Transactions* of the Royal Society (45,615-66, 1748), issued as a separate publication *Observations on the General Composition and Decomposition of Animal and Vegetable Substances*, 1749 (London), he was the first to observe and figure motile spores (zoospores) of water moulds (*Saprolegnia*). He died in Brussels when director of the Academy of Science there. *Needhamia* R. Br. was named in his honour. *DNB* **1**: 1468; *D*: 461 (*BB*: 227).

NEWTON (James; 1639-1718), MD, physician and botanist, was a friend of **J. Ray**. Plates 151-4 of his *A Compleat Herbal*, 1752 (edited by his son, (port.); edn 6, 1802) illustrates diverse larger fungi ('mushromes'). *SC* **3**: 738; *D*: 463 (*BB*: 228).

NOEL (Henry, 6th Earl of Gainsborough; 1743-98 had botanical interests; see **Bolton, J.** *D*: 467 (*BB*: 231).

NOTCUTT (William Lowndes; 1819-68), pharmacist and botanist of Fareham, Kettering, and Cheltenham, Glos. Author of *A Handbook of the Microscope ...*, 1859. *SC* **3**: 777; *D*: 468 (*BB*: 231).

NOWELL (John; 1802-67) was a handloom weaver of Todmorden, Yorks., where he was born and died. See **A. Stansfield**. *Seaward* (1987): 44; *D*: 469 (*BB*: 231).

NOWELL (William; 1880-1968), plant pathologist and agricultural administrator, was born at Heptonstall, Yorks., and qualified from the Royal College of Science. Up to 1913 assistant superintendent, Department of Agriculture, Barbados, he then succeeded F. W. Smith as mycologist and lecturer in agriculture, Imperial Department of Agriculture for the West Indies. From 1915 he was mycologist only and made important investigations on diseases of limes, cacao, cotton, and coconut. Author of *Diseases of Crop Plants in the Lesser Antilles*, 1923. From 1920 agricultural administrator in Trinidad and Tobago, British Guiana, and East Africa (Tanganika). See also **S. F. Ashby**. *WWW (1961-70): 844-5; D: 469*.

O

O'CONNOR (Patrick; 1889-1969), BSc (Lond.), ARCSI, PhD (NUI, 1929), botanist and mycologist, was born at Farnanes, Co. Cork, and after graduation in 1920 was assistant to **Thomas Johnson**, professor of botany at the Royal College, Dublin. In 1930 he was appointed keeper of natural history at the National Museum of Ireland and held this post until his retirement in 1954. From 1939-45 he acted as director of the Museum. O'Connor was a good all-round botanist but he specialized in mycology, particularly rusts. He published many new mycological records for Ireland (see *Sci. Proc. R. Dublin Soc.* **21** (NS): 381-417, 1936; **25** (NS): 33-53, 1949). For many years he was an active member of the Dublin Naturalists' Field Club and the Royal Dublin Society. He also served on the Council (1937-9) and as vice-president of the British Mycological Society and regularly attended forays. His mycological herbarium is at Glasnevin. *Irish Naturalists' J.* **20**: 210-1, 1981; *D: 470*.

OGILVIE (Laurence; 1898-1980), plant pathologist, had two phases in his career. He was plant pathologist to the Department of Agriculture of Bermuda from 1923-27 when he returned to England to succeed R. M. Natrass at Long Ashton Research Station as advisory mycologist until the formation of the National Agricultural Advisory Service in 1946 when he became advisory plant pathologist for the Western Province and was stationed at Westbury-on-Trym. Ogilvie graduated from Aberdeen University (1921), gained a MSc at Cambridge (1927), and became a versatile plant pathologist. He specialized in diseases of fruit, hops, and vegetables and contributed to the knowledge of the epidemiology of black rust of cereals in Europe. He was interested in modern art (of which he owned a notable collection) and was founder and chairman of the Friends of the Bristol Art Gallery. He was also fond of music, Scottish dancing, and in spite of indifferent health (he had a breakdown in 1943) he was a badminton player and an energetic walker. *FBPP News No. 6*: 47-8, 1981; *Bull. BMS 14*: 153-5, 1980.

O'MEARA (Rev. Eugene; ca 1815-80), MA (Dublin, 1858), a founder of the Dublin Microscopical Club, who died at Newcastle Lyons, Co. Down, was a diatomist (collections at **BM**). He recorded *Marasmius hudsonii* for Ireland in 1875 (see

Muskett (1976): 431 (53). *D*: 472 (*BB*: 233).

ORDISH ((Francis) George; 1904-91) entomologist, specialist in crop protection, and writer, lived at Yalding, nr Maidstone, Kent. Among the numerous books he wrote were *Untaken Harvest. Man's Losses of Crops from Pests, Weeds and Diseases*, 1952, *Garden Pests*, 1954, *The Great Wine Blight*, 1972 (*Phylloxera*), and *The Constant Pest; a Short History of Pests and their Control*, 1976. One long-term interest was making wine from his home-grown grapes: *Wine Growing in England*, 1953; *Vineyards in England and Wales*, 1973). *Independent*, 1 March 1991.

OSBORNE (Theodore George Bentley; 1887-1973). Graduated from Manchester University (1908); professor of vegetable pathology and parasitology, Adelaide (1912); professor of botany, Sydney (1928); succeeded A. G. Tansley as Sherardian Professor of Botany at Oxford (1937-53). His most important contribution to mycology was his account of the life history and cytology of *Spongospora subterranea*, the cause of powdery scab of potato (*Ann. Bot.* **25**: 327-40, 1911). *Times* 6 June 1973.

OWEN (Mary Nest (Mrs F. Kidd)), mycologist, married **Franklin Kidd** (1920). In 1919 she described skin spot of potato and named the pathogen *Oospora pustulans* Owen & Wakef. (*Polyscytalum pustulans* (Owen & Wakef.) M.B. Ellis) (*Kew Bull.* 1919: 289-301; see also *J. Minist. Agric.* **26**: 1245-50, 1920.

OWEN (Sir Richard; 1804-92), anatomist, first Hunterian professor of comparative anatomy at the Royal College of Surgeons, London, 1836-56; superintendent of natural history at the British Museum, 1856-83, designed the Natural History Museum at South Kensington. In 1832 recorded aspergillosis in a flamingo; *Phaenicopterus ruber* (*Proc. Zool. Soc. Lond.* **2**: 141-4). *DNB* **2**: 1566; *DSB* **10**: 260-3; *BMJ* 1892 **2**: 1411-5, port.; *Lancet* 1892 **2**: 1475-6.

P

PAINE (Sydney Gross; 1881-1937), BSc (Lond., 1914), DSC (1917), joined the Imperial College, London before the First World War where he became assistant professor of (plant) bacteriology. With **W. F. Bewley** he attributed tomato stripe disease to *Bacillus lathyri* (*Erwinia herbicola*) (*AAB* **6**: 183-202, 1919) and Miss **E. M. Berridge** and Miss **M. S. Lacey** undertook research in his department. Paine received a DSIR grant to study the bacterial decay of stone of buildings in London and ruins elsewhere with the assistance of Miss F. S. Schimmer. He also contributed bacteriology and agricultural bacteriology to the *Encyclopaedia Britannica* edn 12, 1921. Paine's wife was an invalid confined to a wheeled chair.

PALLIN (William Alfred; 1873-1956). Colonel, Army Veterinary Services. The author of *A treatise on Epizootic Lymphangitis*, 1904, based on the outbreak in the British Isles following the return of horses from the Boer war. *Vet Rec.* **68**: 701, 1956; *WWW* **5**: 844.

PALMER, M. G., see **Brokenshire, F. A.**

PARFITT (Edward; 1820-93) was born at East Tuddenham, Norfolk, son of Edward Parfitt head gardener to Lord Hastings, and after holding various gardening posts went on a scientific voyage and was wrecked near the Cape of Good Hope. On return to England he became successively a gardener at Exeter (1848), curator to the Archaeological and Natural History Society of Somerset (1854), and finally (1861) librarian to the Devon & Exeter Institute and Library, Exeter. He left in manuscript. a work on the Fungi of Devonshire, in 12 vols., illustrated by 1,500 of his watercolour drawings (now in the possession of Torquay Natural History Society). *DNB 2: 1585; SC 4: 56; D: 477 (BB: 236).*

PARKER-RHODES (Arthur Frederick; 1914-87), a trained mathematician, Quaker, and one-time Communist, was an intellectual with wide and varied interests which private means enabled him to develop. Educated at Marlborough College, he graduated from Cambridge (Magdalene College) in 1934 and, except for the war years spent at Long Ashton Research Station, Bristol, lived near or in Cambridge for the rest of his life. There he worked at the Cambridge Language Research Unit on mathematical linguistics but his reputation rests on his contribution to 'combinatorial physics' to which he gave its first mathematical shape. One of his other long-term interests was in larger fungi of which he was a persistent collector and on which he became an expert leading forays and giving courses of instruction at Flatford Mill Field Centre and elsewhere. During the fifties he published on various aspects of larger fungi including a notable series of papers on the basidiomycetes of Skokholm Island (where a census of mycelia was attempted), on fairy ring kinetics, and statistical aspects of fungus forays (see *TBMS 37, 38*, 1954-55). *Times 11 March 1987; The Friend 145: 389-90, 1987.*

PARKINSON (John; 1567-1650), apothecary of Ludgate Hill, became apothecary to James I, and subsequently King's Herbalist ('Botanicus Regius Primarius') to Charles I. His most important publication was *Theatrum Botanicum: the Theatre of Plants*, 1640. In Chap. 63 (pp.1316-24) 32 kinds of 'Fungi esculenti. Holsome mushromes that may be eaten' and 32 kinds of 'Fungi perniciosi. Dangerous mushromes' are described. A number of lichens are also included. The descriptions enable most to be identified but it is not certain that these records are all based on British material. *DNB 2: 1594; Arber (1938): 135-8, port.; SC 4: 63; D: 479 (BB: 236).*

PARSONS (Henry Franklin; 1846-1913), MD (London, 1870), while Medical Officer of Health, at Goole, Yorks., 1874-9, listed 179 fungi from the Goole district and also collected lichens. *Naturalist 1914: 8-9, port., Blackwell (1961): 54, 163; Seaward (1987): 45; D: 481 (BB: 238).*

PAUL (Very Rev. David; 1845-1929) graduated from Aberdeen University, where he was awarded the Fullerton Scholarship in Classics, and became an eminent Latin scholar. He was minister at Roxburg (1876-96), then the Robertson Memorial Church, Edinburgh, and served successively as Deputy-clerk, Principal-Clerk, and Moderator of the General Assembly of the Church of Scotland. Dr Paul was

interested in flowering plants but he is especially remembered as a mycologist. He was president of the British Mycological Society (1918) and the Cryptogamic Society of Scotland (1922); also of the Botanical Society of Edinburgh (1899-1901) and the Scottish Alpine Botanical Club (1923). His mycological publications, though not extensive, included an account of the Roxburg neighbourhood (*Hist. Berwicks. Nat. Club* **10-13**, 1882-90). See also **J. Fergusson**. *Proc. LS* **142**: 214, 1929-30; *WWW (1929-40)*: *D*: 483.

PAULSON (Robert; 1857-1935), FLS (1913), was born and died at Hendon, Mddx. A schoolmaster by profession, he was a member of the Quekett Club and a Fellow of the Royal Microscopical Society, and became president of the Essex Field Club (which he joined in 1899) for 1920-3. He joined the British Mycological Society in 1918 and made a number of contributions to the Society's *Transactions* on mycorrhiza and lichens, including a number of lists of lichens recorded on forays (see Hawksworth & Seaward (1977): 130-1). As a lichen specialist he identified collections from Mount Everest and Spitzbergen. His herbarium is at **BM**. *Proc. LS* 1934-5: 186; *Hawksworth & Seaward (1977)*: 29, 130-1; *SC* **4**: 114; *D*: 483.

PAYNE (John Henry; 1857-1931) a Yorkshire analytic chemist. Contributed on fungi to the *Naturalist*. *D*: 484.

PEACE (Thomas Rowland; 1907-62), forest pathologist, was born at Cambridge and graduated from Cambridge University with first class honours in botany in 1928. During the next eleven years he was assistant to **W. R. Day** at the Imperial Forestry Institute, Oxford, where he gained a sound knowledge of the principal British tree diseases. In 1939 he became district forest officer to the Forest of Dean after which he held a similar post during 1942-6 in Kent and East Sussex before becoming the first technical officer at the newly established Forest Research Station of the Forestry Commission at Alice Holt Lodge in Surrey. There he organized the work of the Plant Pathology Section and in 1959 became the Commission's Chief Research Officer. Peace's numerous and diverse publications on forest pathology culminated in the 700-page *Pathology of Trees and Shrubs*, 1962, published by Oxford University Press just before his death. *J. Forestry Commission* **31**: viii-xi, 1962.

PEARLESS, Clara A., see **Pratt, Clara A.**

PEARSON (Arthur Anselm; 1874-1954), agaricologist, was one of those amateur mycologists who attain professional competence in their speciality. Born in London, Pearson was educated in Belgium and spent a year at sea under sail before the mast. At 15 he joined British Belting and Asbestos Ltd. (then known as W. Wilson Cobbett Ltd), of Cleckheaton, Yorks., of which he became Secretary, Director (1912), and Chairman (1937). He travelled widely on the firm's export business and was fluent in French, Spanish, German, and Italian. He was a devoted Roman Catholic, a fine singer of lieder (and a member of both the Oriana Madrigal Society and the English Folk Dance Society), and became the copyright holder of W. Cobbett's *Cyclopaedia of Chamber Music*. For many years he lived at Haslemere, Surrey. Pearson joined the British Mycological Society in 1911. He

was at first interested in rusts but influenced by *J. Ramsbottom* specialized in agarics on which he became an international authority. He published keys, which were very popular, to the British species of *Russula* (1948), *Lactarius* (1950), *Boletus* (1950), and posthumously, *Inocybe* (1954) and *Mycena* (1955) (all in *The Naturalist*), and, with R. W. G. Dennis, a 'Revised list of British agarics and boleti'. 1948. He was invited to investigate the larger fungi of South Africa (1948) and Portugal (1949) and earlier published on the larger fungi of Spain. He regularly attended British and French forays and was always ready to share his expertise. He also made postal identifications for a large circle of correspondents. He was Treasurer of the BMS (1919-46), twice President (1931 and again in 1952 when the autumn foray was in France and Pearson gave his presidential address in French), and was elected to Honorary membership in 1946. He was also President of the Yorkshire Naturalists' Union (1946) and chairman of the Haslemere Educational Museum (and during the Second World War, with **E. W. Swanton**, collected agarics for testing for antibiotics). He left his mycological library to the Linnean Society (of which he was elected Fellow in 1917) and the BMS. His specimens, drawings (boxes 165-7) and papers are at Kew. *TBMS* 37: 321-3, *port.*, 1954; *Proc. LS* 165: 218-9, 1955; *SC* 4: 130; *D*: 485.

PECK (Arthur Edward; 1870-1940), a Yorkshire naturalist, was born in Sheffield and secretary of the Walesward Colliery from 1891 until his retirement to Scarborough in 1909. He was secretary (1911) and president (1927) of the Scarborough Field Naturalists' Club, and from 1915 dominated the Mycological Committee of the Yorkshire Naturalists' Union (of which he became chairman (1931) and as convenor wrote such long minutes of meetings that the chairman refused to sign them). Peck was something of an eccentric. He was 'a fine figure of a man', very rich (his correspondence was on the backs of shareholder reports, balance sheets, etc. and enclosed in re-directed envelopes), a great traveller, Liberal in politics, and attained the rank of Superintendent in the Special Constabulary during the 1939-45 war. Today he is chiefly remembered as a photographer. **Buller** used photographs by Peck in the first three volumes of his *Researches*, as did the **Rolfes** in their *Romance of the Fungus World*, 1925. His collection of lantern slides of larger fungi is at the Natural History Museum, and his mycological library at the Wood End Museum, Scarborough. See **T. B. Roe**. *Naturalist* 1928: 311, *port.*; *Blackwell* (1961): 63.

PERCEVAL (Cecil Henry Spencer; 1849-1920), of Longwitton Hall, Morpeth, Northumberland, was interested in fungi and British orchids. He found *Battarea phalloides* (*Rep. Brit. Ass. Adv. Sci.* 1875, 2: 158-9) and contributed to the *TBMS* (2: 191-2, 1904). *J. Bot.* 1921: 76-7; *D*: 488 (*BB*: 241).

PERCIVAL (John; 1863-1949), agricultural botanist, graduated from Cambridge University (St John's College), 1887-8, became professor of botany at the Agricultural College, Wye, Kent, 1894-1903, and then professor of agricultural botany at University College (from 1926, University), Reading, 1903-32. He was the author of *Agricultural Botany*, 1900 (edn 8, 1936), a standard text, and

Agricultural Bacteriology, 1910. Percival is remembered mycologically for establishing (in 1902) *Chondrostereum purpureum* as the cause of silver leaf of fruit trees (which was exploited by **F. T. Brooks** and his students) and for his account of the life history and cytology of *Synchytrium endobioticum*, the cause of wart disease of potato (*Zbl. Bact.*, Abt.2, **25**: 440-6, 1910). *Nature* **163**: 275, 1949; *WWW (1941-50)*: 904; *D*: 489.

PETCH (Charles Plowright; 1909-88), BA (Cantab.), MD, FRCP, son of **T. Petch**, was educated at Gresham School, Holt, Norfolk, and graduated with first class honours from Cambridge University (St John's College). After a spell of teaching at Stowe school read medicine at St John's College and St Thomas's Hospital, London, and qualified in 1939. He served in the RAF during the Second World War and in 1948 was appointed consultant physician at St Helier's Hospital, Carshalton, where he remained until his retirement to Norfolk in 1975. Like his father, he had a long term interest in the natural history of Norfolk (of which he wrote a flora), including larger fungi. He served on the Council of the Botanical Society of the British Isles and was an active member of the Norfolk and Norwich Naturalists' Society. *BMJ* **296**: 141, 1988.

PETCH (Tom; 1870-1948) (the father of **C. P. Petch**) was one of the outstanding tropical plant pathologists and British mycologists of his generation. Born at Hornsea, Yorkshire, he went to school in Hull and then while school teaching prepared himself for the external degrees of both BA and BSc of London University. He early developed an interest in natural history on which he published a number of contributions and it was **C. B. Plowright**, of King's Lynn, who helped to develop a deep interest in fungi. A friendship with **G. Masee** of Kew led to his appointment in 1905 as Mycologist to the Government of Ceylon (Sri Lanka) at the Botanic Gardens, Peradeniya, a post he held until 1924 when he became founder director of the Tea Research Institute (1925-8).

During the first five years in Ceylon Petch published more than 60 papers on diseases of tropical crops and on fungi, especially Phalloideae and Mycetozoa. Interest in the fungi of Ceylon became a life-long interest which culminated in the posthumous *The Fungi of Ceylon*, 1950, prepared for publication with the help of **G. R. Bisby**. He also wrote *The Physiology and Diseases of Hevea brasiliensis* ..., 1911, *The Diseases and Pests of the Rubber Tree*, 1921, and *Diseases of the Tea Bush*, 1924.

Back in England Petch resumed his loyalties to the Yorkshire Naturalists' Union and to the county of Norfolk. He took a special interest in entomogenous

Figure 19. George Herbert Pethybridge (1871-1948)

Figure 18. Tom Petch (1870-1948)

fungi and published 13 parts of 'Studies on entomogenous fungi' and a series of 7 'Notes on entomogenous fungi' (all in the *TBMS*). He compiled a list of the entomogenous fungi of Great Britain (1932, 1944) and stimulated the interest of **E. A. Ellis** in this group. He also published on the British Hypocreales (1938) and British Nectroideae (1943). His herbarium is now at Kew. In 1908 Petch married Plowright's daughter, Edith Mary, and after Plowright's death lived in his late father-in-law's house and inherited his fine mycological library. *Nature* **163**: 202-3, 1949; *TBMS* **67**: 179-81, *port.*; *SC* **4**: 188; *D*: 491.

PETHYBRIDGE (George Herbert; 1871-1948), a Cornishman, was born and died in Bodmin. After schooling in his home town Pethybridge decided against the family tradition of banking and the law and graduated in science as an External Student of London University from University College of Wales, Aberystwyth. After a spell of school mastering, he gained a doctorate in 1897 under Professor Berthold at Göttingen.

He was then appointed to a post in the Botany Department of the Royal College of Science, Dublin, under the Department of Agriculture and Technical Instruction for Ireland and remained in Dublin until 1923; from 1909 as head of the Seeds and Plant Disease Division. In 1923, because of the change of government, Pethybridge resigned and later in the same year became Mycologist to the Ministry of Agriculture and Fisheries of England and Wales and assistant director of the Ministry's Plant Pathology Laboratory at Harpenden where he remained until his retirement in 1936 when he was awarded the OBE.

Pethybridge's reputation will remain based on his own many innovative researches and those in collaboration with **P. A. Murphy** and **H. A. Lafferty** during his time in Ireland especially the long series reported annually from 1910-19 as 'Investigations on potato diseases' in the *Journal of the Department of Agriculture and Technical Instruction for Ireland* and the studies on *Phytophthora* described in the *Scientific Proceedings of the Royal Dublin Society* and the *Royal Dublin Academy*. His other main field of interest was diseases of flax stimulated by the need to intensify flax production during the 1914-18 war. He also (with **J. Adams**) published a census of Irish fungi in 1910. For his achievements in Ireland he was awarded the Boyle Medal by the Royal Dublin Society in 1921.

The British Mycological Society elected him president for 1926, when his presidential address was entitled 'Mycology and plant pathology', and he was an active member of other societies. For a decade after retirement he edited the *Journal of Pomology and Horticultural Science*. Pethybridge was precise and thorough in all his work and in dealing with authors retained something of the schoolmaster. He was by nature a friendly man and a valued correspondent. *TBMS 33: 162-5, port., bibl., 1950; McKay (1951): 113-7, port., 30-1 (bibl.); Muskett (1976): 401-2, port., bibl.; SC 4: 199; D: 491.*

PETIVER (James; 1658-1718), botanist and entomologist, was a London apothecary and a correspondent of **J. Ray**. Some of his lichen specimens are in the Sloane herbarium. *DNB 2: 1648; Hawksworth & Seaward (1977): 4, 5; SC 4: 203; D: 491 (BB: 242).*

PHILLIPS (H. H.) was a medical man of Bicester, Oxon. His fungus drawings are at **K** (filing boxes 161A, 161B).

PHILLIPS (William; 1822-1905), botanist and antiquary, was a tailor of Shrewsbury. He took up botany about 1861 at the suggestion of the lichenologist **W. A. Leighton** - first flowering plants, then fungi (hymenomycetes) and, especially, discomycetes). He collaborated with **C. B. Plowright** in the publication of a series of papers in *Grevillea* (1873-91) and issued the exsiccati *Elvellacei Britannici* during 1874-81. His *Manual of British Discomycetes*, 1887, was for long the standard British text on this group. Phillips (with **W. B. Allen**) listed the fungi, lichens, and myxomycetes of Shropshire for the *Victoria History of the Counties of England*, 1908. The genera *Phillipsiella* (Cooke, 1878) and *Phillipsia* (Berkeley, 1881) were named in his honour. See also **C. Rea**, **D. Stock**. *DNB 2:*

2836; SC 4: 294; D: 494 (BB: 243).

PIGGOTT (Horatio; 1821-1913), lichenologist of Tunbridge Wells, Kent. His lichens and correspondence with **M. J. Berkeley** are at the British Museum (Natural History). *Hawksworth & Seaward (1977): 133 (bibl.); D: 495 (BB: 244).*

PIM (Greenwood; 1851-1906), born in Dublin, was for many years Secretary to the Conjoint Board of the Royal College of Physicians and Surgeons. He published a number of papers on the fungi of the Counties of Dublin and Wicklow (1878, 1884) and, with a grant from the Royal Irish Academy, Glengarriff and Killarney. His 1878 paper, recording 470 species of fungi, was reprinted in full in the same year in the *British Association Guide to County Dublin*. See also **E. J. McWeeney**. *Hassell (1957): 119; Muskett (1976): 398,451-5 (bibl.); D: 495 (BB: 244).*

PLOT (Robert; 1640-96), MA (Oxon.), 1661; FRS, 1677; antiquary and naturalist, became the first custodian of the Ashmolean Museum, Oxford, in 1683. His *History of Staffordshire*, 1686, included an illustration of *Cladonia coccifera* (reproduced by Hawksworth & Seaward (1977): 5). *DNB 2: 1677; D: 498 (BB: 245).*

PLOWRIGHT (Charles Bagge; 1849-1910) was in medical practice at King's Lynn (where he was born) and lived at North Wootton (where his grandfather had farmed). Interested in fungi from childhood (an interest fostered, it is said, by his aunt, Sarah Ann Pung) he qualified in medicine from Durham and studied in Glasgow under professor J. Lister (the future Lord Lister), and at first practised at Terrington St Clement before moving to Lynn. He compiled a list of the fungi of Norfolk (*Trans. Norf. & Norwich Nat. Soc.* **2, 3, 4**, 1872-89; see **K. Trimmer**), collaborated with **W. Phillips** of Shrewsbury in a series of articles titled 'New or rare British fungi' (1874), and took up the study of pyrenomycetes for which he issued 300 exsiccati as '*Sphaeriacei Britannici*', 1873-8. But his most important work, and one for which he will be long remembered, is *A Monograph of the British Uredineae and Ustilagineae*, 1889, which is based on years of acute observation and also experiments on the life cycles of rusts. Plowright was the first British mycologist to accept heteroecism. He encouraged **E. S. Swanton** and **T. Petch** in their early mycological studies and the latter married Plowright's daughter and after retirement lived in his father-in-law's house at North Wootton and inherited Plowright's fine mycological library. Plowright also instructed farmers and horticulturalists on the recognition and control of plant diseases (including the value of Bordeaux Mixture) on which he wrote in the *Gardeners' Chronicle*. *Plowrightia* Saccardo (1883) and *Plowrightiella* (Sacc.) Trotter (1926) were named in his honour. *TBMS 3: 231-2, 1910; G. J. Cooke (1937): 203; SC 4: 297; D: 498 (BB: 246).*

PLUES (Margaret; ca 1840-ca 1903), naturalist and artist of Rippon, Yorks., published books which she wrote and illustrated on British grasses and ferns and also *Eatable Fungusses*, (1866) (translated into German by **G. W. Johnson**) and *Rambles in Search of Flowerless Plants*, 1864 (edn 3, 1868) which includes a

- number of lichens and larger fungi. Margaret Plues became a nun: Mother Superior at the R. C. Weybridge Convent. *SC 4*: 298; *D*: 498 (*BB*: 246).
- PLUKENET** (Leonard; 1642-1706), botanist, was a London physician who became Queen's botanist to Mary II and superintendent of Hampton Court. His lichen specimens are in the Sloane herbarium. *DNB 2*: 1677; *Hawksworth & Seaward (1977)*: 5, 134, 198; *SC 4*: 298; *D*: 498 (*BB*: 246).
- POLE-EVANS** (Iltud Buller; 1879-1968), CMG (1921), FLS (1907), plant pathologist, graduated from Cambridge as a student of **H. M. Ward**. In 1905 he was appointed mycologist to the Transvaal Government and when the Union of South Africa was established in 1911 became Chief of the Division of Plant Pathology and Mycology of the Union Department of Agriculture and from 1913 was Chief of the Division of Botany and Plant Pathology. He studied the fungi of South Africa. Latterly this work was taken over by Miss E. M. Doidge. *WWW (1961-70)*: 502; *Bothalia 10*: 131-5, *port.*, 1971; *SC 4*: 327; *D*: 499.
- POLWHELE** (Rev. Richard; 1760-1838), curate of Kenton, then Exmouth, Devon, and (in 1809) vicar of Manaccan, Cornwall. Lichens were included in his *The History of Devonshire*, **3**, 1797. *DNB 2*: 1685; *D*: 499 (*BB*: 246).
- PORTE** was a member of the Dublin Microscopical Club and in 1865 published on *Saprolegnia* with sporangia on goldfish (*Proc. Dublin Microscop. Club I*: 47) (fide Muskett (1976): 430). See also **W. Archer**, **W. Frazer**.
- PORTER** (Lilian E. (née Baker); 1885-1973), MSc (Liverpool, 1911), Irish lichenologist, was the daughter of J. G. Baker (1834-1920), keeper of the Kew Herbarium, 1890-99. She published a supplement to **M. C. Knowles'** Irish lichen flora (*Proc. R. Irish Acad.* **51** (B 22): 345-86, 1948). *Hawksworth & Seaward (1977)*: 33, 198; *SC 4*: 346.
- POTTER** (Charles; 1907-89), entomologist, graduated from Queen Mary College, London University, in 1929 and then undertook post-graduate entomology at the Imperial College of Science where he joined the staff for stored products work. From 1938-72 he was on the staff of the Department of Insecticides & Fungicides at Rothamsted Experimental Station where he succeeded F. Tattersfield as head of Department in 1947. After retirement he was consultant to the Wellcome Research Foundation Research Station at Berkhamsted. He did much to promote synthetic pyrethroids as insecticides. *The Independent 18 Jan. 1990*, *port.*
- POTTER** ((Helen) Beatrix (Mrs Heelis); 1866-1943). There were two main phases in Beatrix Potter's life. Up to her marriage in 1913 to William Heelis, an Ambleside solicitor, she wrote the stories for young children (illustrated by her own watercolours) which have become nursery classics. After her marriage she farmed more and more extensively in the Lake District from a base at Sawrey and became well known as a breeder of sheep - in the year she died she was president-elect of the Herdwick Association. She also had a long term interest in the National Trust to which she bequeathed her Lake District property. Always interested in natural history Beatrix Potter made a notable series of some 300 watercolour drawings of larger fungi (most are now at the Armit Library, Ambleside; see also **C.**

McIntosh) 59 of which **W.P.K. Findlay** used to illustrate his *Wayside and Woodland Fungi*, 1967. On several occasions she consulted **George Masee** who communicated to the Linnean Society of London a paper by Beatrix Potter on the germination of spores of the Agaricaceae but this was never published. *DNB 2*: 2842; A. C. Moore, *The Art of Beatrix Potter*, 1955; L. Linder, *The Journal of Beatrix Potter*, 1956; *A History of the Writings of Beatrix Potter*, 1970; *D*: 501.

POTTER (Michael Cressé; 1858-1948), mycologist and botanist, went to school in both Oxford and Cambridge and graduated from Cambridge University (St Peter's College) in 1881. In 1883 he was Senior Optime (Mathematical Tripos) then turned to botany, and as assistant curator re-arranged the herbarium at the Botany School and later reinstated the University Botanical Museum founded by Professor **Henslow**.

During 1886-9 he held travelling scholarships to Portugal and Ceylon and then became head (and later the first professor) of the new Botany Department at Armstrong College, Newcastle-upon-Tyne, where he remained until his retirement in 1925. He took Holy Orders late in life. Potter published a number of papers on plant pathology. He was the first to record *Synchytrium endobioticum* (wart disease of potato) in England (*J. Bd. Agric.* **9**: 320-3, 1902) and made pioneering investigations on bacterial diseases of plants.

He was the first to study soft rot in turnips, etc. (which he attributed to *Pseudomonas destructans* (= *Erwinia carotovora*), 1895-1902. He was president of the British Mycological Society (1909), chairman of the British Association (1916), and, after retirement to Hampshire, president of the Bournemouth Natural Science Society (1941). His hobbies included campanology and dowsing. *Nature* **161**: 540-1, 673-4, 1948; *WW* (1941-50): 929-30; *SC 4*: 364; *D*: 501.

POWER (John; 1758-1847), MD of Warwickshire, studied lichens. *D*: 502 (*BB*: 248).

POWER (Thomas; *fl.* 1845) was a medically qualified lecturer in botany at Cork School of Medicine. See **Murray, D.** *SC 4*: 372; *D*: 502 (*BB*: 248).

PRAEGER (Robert Lloyd; 1865-1953), Irish botanist and naturalist, was a librarian. He graduated from Queen's College, Belfast, in 1886 and from then until 1892 engaged in harbour and water engineering work. In 1893 he was appointed to the National Library of Ireland where he became librarian (1920-24).

He was president of the Royal Irish Academy (1931-4) and the National Trust for Ireland (1928). His *Natural history of Ireland*, 1950: 165-6 surveys mycological references and in *Proc. Roy. Irish Acad.* **39** Sec. B: 1-94, 1929, recent additions to the fauna and flora of Ireland are brought together with references. See also Muskett (1976): 434-43. *WWW* (1951-60): 887-8; *SC 4*: 372; *D*: 502.

PRATT (Clara Anne (Mrs John Pearless, 1866-); 1806-93), b. Strood, Kent; d. London and lived in Surrey and elsewhere. She was the author of popular natural history books with coloured illustrations including *The Poisonous, Noxious and Suspected Plants of our Fields and Woods*, (1857) (edn 2, (1868)). *DNB 2*: 1073; *S & C 4*: 383; *D*: 303 (*BB*: 248).

- PRENTICE** (Ian William; 1913-80), plant pathologist (virologist), was a student at Glasgow University (1931-5) where he graduated, and obtained a PhD by a study of virus diseases of broccoli and strawberry. After serving as a demonstrator at Glasgow for a year he was research assistant in the Plant Husbandry Department of the West of Scotland Agricultural College working on seed-borne diseases. Then, after a similar post at University College, Exeter (1939-43) investigating virus diseases of broccoli and narcissus, he was virologist at East Malling Research Station before moving to the Ministry of Agriculture's Plant Pathology Laboratory at Harpenden, in 1948, where he became deputy director and worked until his retirement in 1973.
- PRESTON** (Norman Carl; 1892-1970), plant pathologist, after war service (RAMC) in Mesopotamia, graduated from London University (Birkbeck College) in 1921 and was an advisory mycologist (plant pathologist) in the West Midlands Province all his working life; first at Harper Adams College, Newport, then Wolverhampton. Club root of brassicas was one of his long term interests. See also **G. H. Brenchley**.
- PRICE** (Sarah; fl. 1860s) was the author of *Illustrations of Fungi of our Fields and Woods. Drawn from Natural Specimens*. 30 pp., 20 plates, quarto, 2 ser., 1864-5. *SC 4: 399*.
- PRYOR** (Alfred Reginald; 1839-81), botanist, was a native of Hertfordshire (b. Hatfield, d. Baldock). After graduating from Oxford University (University College) he devoted the rest of his life to the posthumously published *A Flora of Hertfordshire*, 1887 (edited by B. Daydon Jackson) which includes fungi. He left his herbarium, books, and papers to the Hertfordshire Natural History Society. *DNB 2: 1715; SC 4: 420; D: 506 (BB: 250)*.
- PULTNEY** (Richard; 1730-1801), botanist, was born at Loughborough, practised as an apothecary in Leicester (but was unsuccessful because a non-conformist), became MD (Edinb.), and after a period in London settled at Blandford, Dorset, in 1764. He treated Leicestershire lichens in a manuscript *Catalogue of Leicester Plants*, ca 1747, now at the Linnean Society. *DNB 2: 1718; SC 4: 442; D: 507 (BB: 250)*.
- PURCHAS** (Rev. William Henry; 1823-1903), the son of a wine merchant, was born at Ross-on-Wye, Herefordshire. After ordination in 1857 he held parishes in Derbyshire, Gloucestershire, and at Alstonfield, Staffordshire where he died. With **A. Ley**, he published *A Flora of Herefordshire*, 1889, which includes fungi. *J. Bot. 1904: 80-2, port.; SC 4: 444; D: 507 (BB: 250)*.
- PURTON** (Thomas; 1768-1833), naturalist, was by profession a surgeon and practised in London (1791-5) and then Alcester, Warwicks. He is noted for his 2-volume *Midland Flora. A Botanical Description of British Plants, in the Midland Counties*, 1817-21, which includes illustrations by **J. Sowerby**. Lichens (pp. 575-604) and fungi (612-728) are given emphasis in the second volume. *SC 4: 449; D: 508 (BB: 251)*.

Q

QUEKETT (Edwin John; 1808-47), FLS (1836), microscopist, brother of **J. T. Quekett** and **Eliza C. Quekett**, received his medical training at University College Hospital, London, and became lecturer in botany at the London Hospital in 1835. It was at his home that the (now Royal) Microscopical Society originated in 1839 (see **J. T. Quekett**). He published on ergot (*Trans. Linn. Soc.* **18-19**, 1841-5). *DNB 2: 1724; D: 508.*

QUEKETT, Eliza Catherine, see **E. C. White**.

QUEKETT (John Thomas; 1815-61), histologist, was born at Langport, Somerset, and on leaving school was apprenticed to a Langport surgeon and completed his medical training at King's College, London and the London Medical School. In 1843 he was appointed assistant conservator of the Hunterian Museum of the Royal College of Surgeons, under **R. Owen** whom he succeeded as conservator in 1856. Author of *Practical Treatise on the Use of the Microscope*, 1848; he was treasurer of the Microscopical Society (1841-60) (see **Quekett, E. J.**). In 1865 the Quekett Microscopical Club (to which over the years a number of mycologists (including **H. A. Dade**) interested in histology and microscopy have been members) was founded (with Edwin Lancaster as president) and named in his honour (see **P. B. Ayres, M. C. Cooke, R. Hardwicke**). *DNB 2: 1724; SC 4: 452; D: 508 (BB: 251).*

QUILTER (H.E.; ca 1850-1915) amateur geologist and botanist. Author of 'A contribution to the micro-fungi of Leicestershire' (*Trans. Leic. Lit. Phil. Soc.* **12: 70-74**, 1908). *D: 508.*

R

RAISTRICK (Harold; 1890-1971) graduated from Leeds University in 1912, worked under the biochemist Sir Gowland Hopkins at Cambridge where he began studies on the metabolism of moulds (while his fellow research student, Marjorie Stephenson, began parallel studies on bacteria).

In 1921 he took charge of the biochemical work at Nobel's Explosive Company in Ayrshire. It was here that the first-fruits of his studies on the metabolic products of microfungi matured and this interest was further developed on appointment in 1929 as professor of biochemistry at the London School of Medicine & Tropical Medicine where he remained until retirement in 1956. The collaboration with J. H. Birkinshaw, **G. Smith**, and others resulted in the important series of papers titled 'Studies in the biochemistry of micro-organisms' published between 1931 and 1964 (*Phil. Trans* **220B**, *Biochem. J.* **25-93**). These papers include descriptions of many new metabolic products of fungi including

griseofulvin and patulin. Raistrick was elected FRS in 1934. *DNB (1971-80): 698; Biogr. 1 RS 18: 489-509, port., bibl., 1972.*

RALFS (John; 1807-90), marine algologist of Penzance, Cornwall, qualified in medicine but had to abandon practice because of ill health. He contributed the fungi of West Cornwall to the *Trans. Penzance Nat. Hist. Antiq. Soc 1-2*, 1880-86, and corresponded with **A. H. Hassall** whom he helped with freshwater algae. **M. J. Berkeley** named the algal genus *Ralfsia* in his honour. *DNB 2: 1733; A. G. Lewis, John Ralfs, an old Cornish botanist, 1907 (port. Flora of Devon 2(2) The Marine Algae : 73, 1952; D: 509 (BB: 252).*

RAMSBOTTOM (John; 1885-1974), who spent virtually the whole of his working life (1910-50) at the Botany Department of the British Museum (Natural History) of which he became Keeper, was probably the best known mycologist of his generation in England.

Figure 20. John Ramsbottom (1885-1974)

Ramsbottom belonged to numerous societies, attended meetings regularly, and always spoke. He served as president of many societies, including the Essex Field Club, the Quekett Microscopical Club, the British Mycological Society (twice), and the British Society for Mycopathology, and his presidential addresses were often valuable reviews of mycological topics, those to the Linnean Society (1941, on the history of mycology) and to Section K of the British Society for the Advancement of Science (1936, on the uses of fungi) being notable. Other interests were orchid mycorrhizas and diseases of the rose. He also had many Continental contacts, especially with the French Mycological Society. In 1953 he summarized many aspects of these wide interests in *Mushrooms and Toadstools* in Collin's New Naturalist series, a book that was much appreciated. During his early days at the Museum Ramsbottom published lists of British phycomycetes and discomycetes (a revised version of the latter in collaboration with Frances Balfour-Browne appeared in 1951) and in 1923 wrote for the Museum *A Handbook of the Larger British Fungi* (based on **Worthington G. Smith's Guide to Sowerby's Models of British Fungi**, 1893), which sold in quantity during the next 3-4 decades. John Ramsbottom was born in Manchester and had a restricted childhood and education. After four years as a pupil teacher in Manchester he entered Emmanuel College, Cambridge in 1905, graduated 1908-9, when he returned to Manchester to take up a scholarship under Professor **Weiss**. During the first World War, after some training in England, he served as protozoologist in Salonica, attaining the rank of Captain in the Royal Army Medical Corps. For his services he was awarded the military OBE. Many other honours came his way. On retirement he travelled widely, usually with his daughter Mary. *DNB (1971-80): 701; TBMS 65: 1-6, port., 1975; 49: 1-2, port., 1966; SC 4: 574; D: 510.*

RAMSBOTTOM (James Kirkham; 1891-1925), gardener at Chelsea Physic Garden (1911) and the Royal Horticultural Society, Wisley (1911). Author of 'Iris leaf-blotch disease (*Heterosporium gracile* Sacc.) [*Mycosphaerella macrospora*] (*J. Roy. Hort. Soc.* **40**: 481-92, 1915 and 'Investigations on Narcissus disease' (*ibid.* **51-64**, 1918). **J. Ramsbottom** was a brother. *Gndrs Chron. 1925 1: 68, port.; D: 510 (BB: 252).*

RAUTER (Ferdinand; 1902-87), musician (pianist and teacher), was born in Austria and came to England in 1939. He was a mycophagist and in one season claimed to have eaten examples of some 90 species of fungi. One Sunday during the 1939-45 war, a collecting trip ended in a London restaurant where the proprietor offered to buy the basketful of specimens. As a result, Rauter equipped his bicycle with wastepaper baskets on either side of each wheel for mass collecting and at the end of the season was able to send a useful donation to the Musicians' Benevolent Fund. *The Independent 14 Dec. 1987, port.*

RAVENSHAW (Rev. Thomas Fitzarthur Torin; 1829-82) after graduating from Oxford University was curate at Ilfracombe, Devon, and then rector at Pewsey, Wilts. In 1874 he listed fungi and lichens in the account of the botany of North Devon which he contributed to W. Stewart's *North Devon Handbook*. *D: 512 (BB: 253).*

- RAY** (John; 1627-1705), English botanist and naturalist of Black Notley, Essex, included a list of British fungi in his *Synopsis Methodica Stirpium Birtannicarum*, 1690 (and later editions) and in *Historia Plantarum*, I: 84-111, 1686, distinguished hypogeous fungi as a separate group and also used the presence or absence of gills as a taxonomic criterion. See also **S. Brewer, J. J. Dillenius, S. Doody, M. Lister, J. Petiver, T. Robinson**. C. E. Raven, *John Ray, Naturalist, his Life and Works*, (edn 2, 1950) *DNB* 2: 1744; *DSB* II: 313-8; *SC* 4: 604; *D*: 513 (BB: 254).
- RAYNER** (John Frederick; 1854-1947), florist of Swaythling, Southampton, Hants., compiled the fungi of the Isle of Wight (in F. A. Moray, *A Guide to the Natural History of the Isle of Wight*, 1909) and the New Forest (*Proc. Bournemouth Natural Sci. Soc.* 3: 105-55, 1912). *D*: 514.
- RAYNER** (Mabel Mary Cheveley (Mrs W. Neilson Jones): d. 1948), mycologist, was educated at University College, London, and University College, Reading, and graduated BSc (Lond.) (with first class honours) in 1908 and DSc in 1915. From 1905-18 she was on the staff of University College, Reading, where in 1910 she collaborated with W. Neilson Jones (whom she married two years later) on an investigation of the ecology of *Calluna* on the Wiltshire and Berkshire Downs and claimed to have established the symbiotic association of *C.vulgaris* with *Phoma radidis callunae*. Dr Rayner spent the rest of her career at Bedford College, London, where she became the leading British student of mycorrhiza on which her most notable publication was *Mycorrhiza*, 1927 (New Phytologist Reprint 15). Subsequently she did extensive research on the ectotrophic mycorrhiza of conifers of Wareham Heath, Dorset, on behalf of the Forestry Commission. Aspects of this work were published with Neilson Jones as *Problems of Tree Nutrition*, 1944. Among other botanical books she wrote *Trees and Toadstools*, 1945. She also contributed an account of mycorrhiza to the *Encyclopaedia Britannica*. *Nature* 163: 275, 1949; *WWW (1941-50)*: 958; *D*: 514.
- REA** (Amy Emma (née Rose); 1864-1927) was the wife of **Carleton Rea** (q.v). She was elected President of the British Mycological Society for 1915.
- REA** (Carleton; 1861-1946) was a founder of the British Mycological Society (see **A. Clarke**) and did more than anyone to establish the new Society in which he held continuous office for thirty-four years as Secretary, Treasurer, and Editor of the *Transactions*, for the greater part of the time simultaneously, and also served twice as President (1908, 1921), was elected to Honorary Membership, and was Vice-President for the Fiftieth Anniversary Year, the year of his death. A native of Worcester, where he was born and died, Carleton Rea trained as a barrister but he had little interest in the law which he finally abandoned in 1907. His enthusiasm from childhood was for natural history and he became an expert all-round naturalist.

With J. Amphlett (1845-1918) Rea published the *Botany of Worcestershire*, 1909, and was a life-long and active member of the Worcestershire Naturalists (see M. M. Jones, *The Lookers-out of Worcestershire*,

Figure 21. Carleton Rea (1861-1946)

1980). Introduced to fungi by his attendance at Woolhope Club Forays and meetings of the Yorkshire Naturalists, larger fungi became his principal interest. He listed the fungi of Herefordshire for the *Victoria History of the Counties of England* (1907) but is best remembered for *British Basidiomycetidae*, which was one of the most comprehensive regional accounts of fungi of its time. It has no illustrations but in 1898 he married a fellow member of the Worcestershire Naturalists **Amy Emma Rose** (whose father John Rose, a Worcester solicitor, became a Foundation Member of the British Mycological Society) who was an expert watercolourist (as was her daughter **Violet Rea** (Mrs Astley Cooper) and the long and attractive series of drawings of larger fungi which they produced is now deposited at the Royal Botanic Gardens, Kew. Carleton Rea was one of the British Mycological Society's eccentrics. His distinctive dress and manner made him a noticeable figure on forays. He always wore knickerbockers, a white shirt

with starched cuffs, crowned, typically, with a panama hat. A moustache, monocle, and ruddy complexion all combined to give him a rakish appearance. His temper was peppery, he disliked deviation from his often somewhat peculiar ways, and though patient and helpful to anyone seriously interested in agarics did not suffer fools gladly. In autumn he had a heavy post of specimens sent to him for identification to which he gave meticulous attention usually replying promptly by postcard (see the analysis by **T. E. T. Bond** (*Bull. BMS* **11** (2): 81-120, 1977) of the long series to **E. M. Day**) or letter, the very small-sized notepaper of the latter being characteristic. See also **W. B. Allen**, **W. L. W. Eyre**. *TBMS* **30**: 180-5, *port.*, 1948; *SC* **4**: 612; *D*: 514.

REA (Margaret Williamson; b. 1875), BSc(Belfast, 1919), was interested in myxomycetes. Contributed to the *New Phytologist* and the *Irish Naturalist*. Member of the BMS. *Praeger, Irish Nat.* 1949: 147; *D*: 514.

REA (Violet (= Mrs Astley Cooper); d. 1977), the daughter of **C. Rea** (q.v.), was, like her mother (**A. E. Rea**), an expert watercolourist.

READ (W. H.; d. ca 1986), MSc (Birm.), AIC, joined the Experimental & Research Station, Cheshunt in 1929 where he became head of the Fungicides and Insecticides Department. He was the first to prove that 'water-spot' of tomato fruit was caused by spores of *Botrytis cinerea* (see *Ann. Rep. Exp. Res. Stn Cheshunt* 1936 : 64-9, 1937; *Ann. Appl. Biol.* **25**: 308-21, 1938).

READER (Rev. Henry Peter; 1850-1929), a Dominican priest of Holy Cross Priory, Leicester, was the first 'Distributor' of the Lichen Exchange Club (see **A. R. Horwood**). *Hawksworth & Seaward* (1977): 26-7; *D*: 514.

REES (John; 1890-1955), BA (Wales), MSc, plant pathologist, was associate extension lecturer in agriculture at University College of North Wales, Bangor (1919) and after a period of school teaching became advisory agriculture botanist at University College, Cardiff (1946) and later advisory plant pathologist, South Wales Sub-centre, Cardiff (from 1946). Author of 'Glamorgan Crop Plants and their Diseases' (*Glamorgan Co. Hist.* **1**: 232-40, 1936. *Ainsworth, G. C. & Waterhouse, G. M.* (1989): 35.

RELHAM (Rev. Richard; 1754-1823), MA (Cantab., 1779), FRS (1787), FLS (1789 - an original Fellow), was rector of Hemingby, Lincoln. He included fungi in his *Flora Cantabrigiensis*, 1785-93 (edn 3, 1820) which was illustrated by **J. Sowerby**. *DNB* **2**: 1753; *SC* **4**: 713; *D*: 516 (*BB*: 255-6).

REYNARDSON (Samuel; d. 1721), was a nurseryman of Hillingdon, Middlesex. The Sloane MS 4015 contains (ff. 19-33) drawings of fungi mainly from his orchard. *D*: 517 (*BB*: 256).

RHODES (Mabel; b. 1888) was born in London and privately educated. She spent her working life as an assistant at the Lister Institute, London, first to Professor E. G. Minchin, Protozoology Department (1907-15), then Dr. H. Chick, Department of Experimental Pathology (1915-19), and finally Dr **St John Brooks**, head of the National Collection of Type Cultures, when she was responsible for the fungal cultures until they were dispersed in 1947 (see **R. T. St JOHN BROOKS**). Miss

Rhodes joined the British Mycological Society in 1921. See also **H. A. Dade**.

RHODES (Rev. Dr. Philip Grafton; 1855-1934), FLS (1925), belonged to a Birmingham family and was educated at King Edward's School and graduated from Cambridge (Pembroke College) with first class honours in classics. While curate at Kidderminster he became a Roman Catholic and was finally priest at St Mary's Catholic Church at Evesham. He had natural history interests, specializing in bryophytes and lichens and later fungi (pyrenomycetes). He published lists of lichens of the Channel Islands and localities in England (see Hawksworth & Seaward (1977) 26, 139). His mosses are at **BM**. *Proc. LS 1934-5: 187; SC 4: 755; D: 517*.

RICHARDS (Mervyn; d. 1977), mycologist, was a native of the Rhonda Valley and went to school in Tony Pandy. As a child he lost a leg but in adult life many were unaware of this disability. After graduating from Cambridge (Emmanuel College) he was schoolmaster and demonstrator in biology at the University College of South Wales & Monmouth before joining **H. A. Hyde** and **D. A. Williams** at the Asthma & Allergy Unit of St David's Hospital, Cardiff, as mycologist where in 1954 he gained a PhD (Wales) for his studies on the mould content of the air in relation to asthma.

He then spent a year at the Prairie Regional Laboratory in Saskatchewan before joining the Research Centre for Chemical Microbiology in Rome under the directorship of **Ernst Chain**. Finally he became mycologist at Beecham Research, Brockham Park, where he continued his studies on aerobiology in relation to asthma. Richards died suddenly while attending the Sixth International Symposium on Actinomycetes at Debrecen, Hungary, and was buried at Dorking, Surrey. Richards was a founder member of the British Society for Mycopathology for which he served a term as secretary. *Brit. Soc. Mycopath. Newsletter (Winter, 1985): 2*.

RICHARDSON (Richard; 1663-1741), MD (Leyden, 1690), FRS (1712), was a botanist and antiquarian of North Bierley, Yorks., where he practised as a physician and made a garden. He corresponded with **Hans Sloane** and **Dillenius** and contributed many records (including some for fungi and lichens) to Dillenius's revision of **John Ray's Synopsis** of 1724. He found the stinkhorn (*fungus phalloides* [*Phallus impudicus*]) and on old cow dung '*fungus minimus infundibuliforme superne punctis rotatus*' [*Poronia punctata*]. Extracts from his correspondence were published by **Dawson Turner** in 1835. *DNB 2: 1773; Blackwell (1961): 53; Seaward (1987): 38, port.; SC 4: 771; D: 519 (BB: 256)*.

RIDDELL (Ronald William; 1913-84), FRCP, FRCPath, MD, was a medical pathologist who developed an interest in pathogenic fungi and studied under **J. T. Duncan** whom he succeeded as Director of the Mycological Reference Laboratory of the Public Health Laboratory Service based at the London School of Hygiene & Tropical Medicine. Later he was consultant bacteriologist to the Brompton, National Heart, and St John's Hospitals in London. *Times 30 Nov. 1984*.

RIDLEY (Henry Nicholas; 1855-1956), FLS (1881), FRS (1907), CMG (1911), botanist, after graduating from Oxford (Exeter College) served on the staff of the Botany Department of the British Museum (1880-7) and was then appointed as the first scientific director of the Singapore Botanic Gardens and forests of the Straits Settlements (1888-1911). Best known for his *Flora of the Malay Peninsula*, 1922-8 and *The Dispersal of Plants Throughout the World*, 1930, and for establishing in Singapore a plantation of *Hevea* rubber trees from seedlings raised at Kew from seed collected in Brazil by H. A. Wickham in co-operation with the Brazilian Government. Ridley also had a long term interest in pests and diseases of plants and in 1922 became a member of the Honorary Committee of Management of the Imperial Bureau of Mycology. *DNB 2*: 2857; *Biog. RS 3*: 141-59, *port., bibl.*, 1957; *SC 4*: 786; *D*: 520.

RILSTONE (Francis; 1881-1953), Cornish botanist and mycologist, was headmaster of Polperro Primary School and retired to Perranporth. As a botanist, he was a *Rubus* specialist. As a mycologist, he was a noted collector of microfungi (for **E. W. Mason**, **W. B. Grove**, and others) and he compiled a ms. list of Cornish fungi (copy in the British Mycological Society's library). He planned the BMS 1952 Spring Foray at Perranporth (*TBMS 36*: 166, 1953). *SC 4*: 795; *D*: 521.

RIPPER (Walter Eugene; 1908-65), plant protection specialist, an Austrian by birth, was an entomologist by training. He gained a PhD at Vienna University in 1930, and worked in Europe for the United States Department of Agriculture as entomologist in 1931. In 1938 he settled in Cambridge, took British nationality, and the next year founded Pest Control Ltd of which he was managing director and Sir Guy A.K. Marshall (director of the Commonwealth Entomological Institute, 1913-42) director. This company was absorbed by Fisons Ltd in 1954 when Rippon in partnership with Dow Chemical Company founded Dow Agrochemicals Ltd. of King's Lynn. He advocated systemic insecticides and the application of sprays by helicopters and by unmanned machines. He died in an air crash on his way back from the Sudan. *Times 26 May 1965*.

RISHBETH (John; 1918-91), FRS (1974), OBE (1985), graduated from Cambridge (Christ's College), MA, PhD, ScD. After posts as chemist at the Royal Ordnance Factories, bacteriologist in the Scientific Adviser's Division, Ministry of Food, and plant pathologist to the West Indian Banana Research Scheme, he became lecturer in botany (1953-73) and subsequently reader in plant pathology (1973-84) (Emeritus, 1984-91) at Cambridge. He is best remembered for his investigations on the control of *Heterobasidion annosum* on pine stumps in East Anglian plantations by the use of chemicals or the inoculation of the stumps with the saprobic fungus *Peniophora gigantea*. On his retirement the Forestry Commission named a wood in his honour. *Independent 8 June 1991, port.*

ROBERTS, H. Leslie, see Leslie-Roberts, H.

ROBERTS (Sir William; 1830-99), FRS (1877), was physician at the Royal Infirmary, Manchester (1854-83) and then moved to London. In his 'Studies in Biogenesis' (*Phil. Trans.* **169**: 457-77, 1874) he appears to have been the first to have

published the antagonistic effect of *Penicillium* on the growth of bacteria (see *Lancet* 1950 **1**: 836). See also **T. H. Huxley, J. Lister**. *DNB* **2**: 2456.

ROBERTSON (William; d. 1846/7), lichenologist of Newcastle-upon-Tyne was a clerk in the coal trade. The residue of his lichen collection is at Kew. An annotation he made in his copy of Winch & Thornhill, *The Botanist's Guide to the Counties of Northumberland and Durham*, 1807 (at the Hancock Museum) appears to be the first record of the harmful effects of pollution on lichens on Tyneside. *Gilbert* (1980): 334; *D*: 524 (*BB*: 258).

ROBINSON (Sir Tancred; d. 1748), MD (Cantab.), FRS, born in Yorkshire, became physician to George I. He was the first to describe English truffles (*Phil. Trans.* **17**: 824-6, 1693) from Rushton, Northants (a whole truffle and one in median section figured) and sent specimens to **John Ray**. *D*: 524-5 (*BB*: 259).

ROBINSON (Wilfrid; 1885-1930), MSc (Manch., 1914), DSc (1919), FLS (1927), became professor of botany at University College, Aberystwyth (1926-30). Studied *Sporodinia* (*TBMS* **10**: 307-14, 1926). *Nature* **125**: 57, 1930; *D*: 525.

ROBINSON (William; 1838-1935), FLS (1806), was under-gardener, Royal Botanic Society, Regent's Park, London, 1861-7. His numerous books included *Parks, Promenades, and Gardens of Paris*, 1869 (edn 2, 1878), which includes an account of mushroom growing in the caves beneath Paris, and also *Mushroom Culture: its Extension and Improvement*, 1880. *D*: 525.

ROBSON (Edward; 1763-1813), a Yorkshire botanist (b. Darlington; d. Tottenham, Mddx) corresponded with **Withering** and contributed to **J. E. Smith's** *English Botany* and to **Bolton's** *Fungusses*. He described and illustrated *Lycoperdon* (*Geaster*) (*Gentleman's Magazine* **1**: 113, 1792). *DNB* **2**: 1794 (under **Stephen Robson, his uncle**); *SC* **4**: 818; *D*: 526 (*BB*: 259).

ROBSON (Stephen; 1741-79) (uncle of **Edward Robson**), linen manufacturer and grocer of Darlington, Yorks., in his *British Flora*, 1777, used 'archil' as the collective name for lichens and accepted 87 species. *DNB* **2**: 1794; *Hawksworth & Seaward* (1977): 8; *SC* **4**: 819; *D*: 526 (*BB*: 259).

ROE (T.B.). Little is known about this Yorkshireman apart from his being assistant for some years to the eccentric **A. E. Peck** (1870-1940) of Scarborough. When Peck developed an interest in larger fungi, Roe was allocated the microfungi but on leaving Scarborough for Leeds (where he was an active member of the Naturalists' Club) he took up agarics. *Blackwell* (1961): 64.

ROEBUCK (William Denison; 1851-1919), Yorkshire naturalist, was president of the Yorkshire Naturalist's Union for 1903 He arranged the first fungus foray of the YNU (the first Union meeting devoted to a single group) - at Leeds in 1881 - which was attended by **W. Phillips, J. E. Vize, C. B. Plowright**, and also the YNU member, **G. Masee**, as experts, when about 50 species were added to the county flora (see *Naturalist* 1881-2: 69-71). A second foray was arranged by **W. N. Cheeseman** at Selby in 1884 (*Naturalist* 1884: 72,140), the third at Leeds in 1888 (*Naturalist* 1888: 321), and the fourth at Doncaster in 1891 (*Naturalist* 1891: 399) which was the first of the series of annual forays held in different parts

of Yorkshire which still continues. It was at these forays that the formation of a national mycological society was mooted - see **H. G. Bull, A. Clarke**. *Proc. LS 1918-19: 64-5; Blackwell (1961): 164; D: 527.*

ROLFE (Frank Wallace, 1888-1947) was Exhibition Officer at the Imperial Institute, South Kensington, London. With his brother, **R. T. Rolfe** (q.v.) he wrote *The Romance of the Fungus World*, 1925.

ROLFE (Robert Thatcher; 1833-1958), OBE (1952), FRIC (1911), a chemist, was educated at the County School, Richmond, Surrey, and King's College, London University. He became assayer to Terra Nova Properties Ltd. and the Anglo-Newfoundland Development Co., Newfoundland, and visited smelting works in various European countries. In 1912 he was appointed metallurgist to W. H. Allen & Co. Ltd. where he remained until his retirement in 1955. He published a number of books on metallurgy and foundry practice and with his brother, **F. W. Rolfe**, wrote *The Romance of the Fungus World*, 1925, which includes aspects of folklore pertaining to fungi not easily accessible elsewhere.

ROOK (Arthur; 1918-91), dermatologist, graduated from Cambridge (Trinity College) and qualified in medicine at St Thomas's Hospital, London, in 1942. After war service in the RAF he was influenced by G.B. Dowling and became dermatologist to the United Cambridge Hospitals (1953-77). He was president of the British Association of Dermatologists (1974-5; also librarian, the International Society of Tropical Dermatology, and the British Society for the History of Medicine. He was author of *Textbook of Dermatology*, 1968. *Independent* 7 Aug. 1991.

ROPER (Francis Clarke Samuel; 1819-96), FLS (1857). Author of *Catalogue of Works on the Microscope and Those Referring to Microscopical Subjects*, 1865, and president of the Eastborne Natural History Society. *J. Bot.* 1896: 430-1, port.; *D: 530 (BB: 26 1).*

ROSE (Amy Emma), see A. E. Rea.

ROSE (Hugh; ca 1717-92), an apothecary of Norwich found *Hydnum auriscalpium* near Norwich. *G. J. Cooke (1937): 198; D: 530 (BB: 262).*

ROXBURGH (Archibald Cathcart; 1866-1954), dermatologist at St Bartholomew's Hospital, London, was the first in England to use ultra-violet light for ringworm diagnosis (*Brit. J. Derm.* **39**: 351-2, 1927). *Times* 4 December 1954; *Ainsworth & Stockdale (1984): 10.*

RUFFORD (Rev. William Squire; c. 1786-1836), BA (Oxon., 1808) was rector of Badsey, Worces. (from 1817), and Lower Sapey (from 1831). He helped **T. Purton** with fungi and lichens for the *Midland Flora* and his wife drew some of the plates. *D: 534 (BB: 264).*

RUSSELL (Anna (née Worsley); 1807-76), b. Bristol, d. Kenilworth, Warwicks., made drawings of fungi which are now at the Natural History Museum (**BM**) and published a list of some rarer fungi found near Kenilworth (*J. Bot.* 1868: 90-1). *D: 534 (BB: 264).*

RUTTY (John; 1697-1775) a Quaker physician (MD, Leyden), was born in Wiltshire and from 1723 lived in Dublin. He wrote on a variety of topics including the stone,

mineral waters, history of Quakerism, milk, and a 40-year survey of Dublin weather. Always interested in natural history, in his *An Essay Towards a Natural History of the County of Dublin*, 2 vols, 1772, he was the first to mention an Irish truffle. *DNB* 2: 1833; *Muskett* (1970): 397; *D*: 536 (*BB*: 265).

RYLANDS (Thomas Glazebrook; 1818-1900), FLS (1862), diatomist of Warrington, Lancs., in 1842 (*Phytologist* 1: 341-8) illustrated intra- and intercellular mycelium in the roots of the orchid *Monotropa hypopitys* but did not recognize the symbiotic relationship (cf. **G. Graves**, **E. Lees**). *Proc. LS* 1901-2, 41-2; *D*: 536 (*BB*: 265).

S

SADLER (John; 1837-82), Edinburgh botanist, assistant to **J.H. Balfour** (1854), was assistant secretary to the Botanical Society of Edinburgh, 1858-79. He contributed lichens to Balfour's *Flora of Edinburgh*, 1863 (edn 2, 1871) and made other lichen records for Scotland (see Hawksworth & Seaward (1977): 145, bibl.). *D*: 537 (*BB*: 266).

St JOHN-BROOKS (Ralph Terence; 1884-1963), medical bacteriologist and microbiologist, was born in Dublin where he qualified MA, MD, and DPH, subsequently becoming DTM & H, and FLS. He was the first curator of the National Collection of Type Cultures, based at the Lister Institute, London, and during his curatorship (1920-46) the collection increased from 200 to 5,000 cultures. The fungal cultures were in the charge of **Mabel Rhodes**. In 1947 the NCTC was restricted to bacteria of medical and veterinary interest and moved to the headquarters of the Public Health Laboratory Service at Colindale in north London.

Fungi pathogenic for man and animals were transferred to the Mycological Reference Laboratory of the PHLS (then at the London School of Hygiene & Tropical Medicine; see **J. T. Duncan**). Other fungi became the basis of the culture collection at the Commonwealth (now International) Mycological Institute, Kew (see **H. A. Dade**), with the exception of wood-destroying fungi (Forest Products Research Laboratory, Princes Risborough, Bucks. - see **K. St G. Cartwright**) and yeasts (now at the Food Research Institute, Norwich, Norfolk). During 1943-47 St John-Brooks served as the first secretary of the MRC Committee on Medical Mycology (see **S. P. Wiltshire**). *BMJ* 1963 1: 1238, port.; *Lancet*: 1963 1: 1005; *J. Gen. Microbiol.* 42: 165-7, port., 1966.

SALAMAN (Redcliffe Nathan; 1874-1955), MD, FRS, a member of a prosperous and intellectual Jewish family, was director of the Pathological Institute of the London Hospital from 1901-4 when because of ill health he settled in the country at Barley, Herts., and devoted himself to scientific interests and public work.

Salaman developed an unrivalled knowledge of the potato (hence the appellation 'Potato Salaman') and from this base wrote his classic *History and Social Influence of the Potato*, 1949. When the Potato Virus Research Station of

Cambridge University School of Agriculture was founded in 1926 Salaman was appointed director. The next year he appointed **K. M. Smith** as entomologist to the Station and subsequently **F. C. Bawden** was his assistant.

Much fundamental work was done under his supervision in disentangling virus diseases of the potato and the description of virus diseases of other plants. Earlier Salaman played a prominent part in rationalizing the names of potato varieties and became chairman of the Potato Synonym Committee of the Royal Horticultural Society and one result of this was Salaman's *Potato Varieties*, 1926, another fundamental work.

In 1908 he discovered resistance to blight in a wild potato seedling and by hybridization and selection obtained blight-resistant commercial varieties. In addition to his versatility as a research worker Salaman saw service in the RAMC in Palestine during the 1914-18 war and later became an active and influential governor of the Hebrew University at Jerusalem. During the Second World War he was chairman of the Jewish Committee for Relief Abroad and held office in other Jewish societies. He was also chairman of the Justices for the Odsey Division of Hertfordshire and a member of the Hertfordshire Agricultural Committee. *DNB* 2: 2871; *Biogr. RS* 1: 239-45, port., bibl., 1955; *Lancet* 268: 1333-4, 1955; *D*: 537.

SALMON (Ernest Stanley; 1872-1959), plant pathologist, is still remembered for his classical 'Monograph on the Erysiphaceae' (*Mem. Torrey Bot. Club* 9, 292 pp., 1900) which resulted from his studies at the Joderell Laboratory of the Royal Botanic Gardens, Kew. In 1906 he was appointed mycologist (to study crop diseases) at the South-Eastern Agricultural College, Wye, Kent, where he remained until his retirement in 1939, becoming, successively, a recognized teacher (1907), reader (1912), and finally professor (1925) of mycology of London University based at Wye. During the pre-1914-18 was years he gave an annual course of lectures at the Imperial College of Science, South Kensington, to supplement those given by **V. H. Blackman**. Salmon conducted an energetic campaign to stamp out American gooseberry mildew (which resulted in a revision of the Destructive Insect & Pests Act of 1907), promoted the control of apple scab by chemicals, and became a world authority on the breeding of hops and hop diseases. In 1928 he was granted a travelling fellowship to visit Bavaria to study hop growing with special reference to powdery mildew.

Salmon was the leading British plant pathologist of his generation and his publications (either alone or in collaboration with his colleagues **M. W. Ware** or **H. H. Wormald** (of East Malling) are many and diverse. He was president of the British Mycological Society for 1911 and was made an honorary member of the Royal Horticultural Society and a fellow of Wye College. See also **E. J. Butler**. *Nature* 184: 1188, 1959; *Times* 18 Oct., 1959; *SC* 5: 10; *D*: 538.

SALT (Jonathan; 1759-1810), FLS (1797), was a Sheffield cutler and a friend of **James Sowerby** who contributed some lichens to *English Botany* and made notable collections of lichens in the Sheffield area. His herbarium is at Sheffield Museum.

Seaward (1987): 39, 40; D: 539 (BB: 267).

SALWEY (Rev. Thomas; 1791-1877), lichenologist and mycologist, rector of Oswestry (1833-72), collected extensively and sent specimens to **W. Borrer**, **W. Mudd**, and **W. A. Leighton**. He published lists of fungi and lichens for a number of localities and also *Duties of a Christian Magistrate*, 1835, and *Gospel Hymns*, 1847. *Ustilago salvei* B.& Br. (1850) (*U. striiformis*) was named in his honour. *J. Bot.* 1878: 63; *Hawksworth & Seaward (1977): 19, 146 (bibl.); SC 5: 16; D: 540 (BB: 268).*

SAMPSON (Kathleen; 1892-1980) was the daughter of a Chesterfield pharmacist, a keen naturalist. She graduated from the Royal Holloway College in 1913 where for the next two years she undertook research on *Phylloglossum* for which she was awarded a MSc. During 1915-17 she was assistant lecturer in agricultural botany at Leeds University (investigating the common scab of potato) and then worked with Professor R. G. Stapledon. In 1919 she was appointed lecturer in agricultural botany at University College of Wales, Aberystwyth, under Professor Stapledon and held that post until her retirement, in 1945, to Lacey Green in the Chilterns where her hobbies included gardening and bird watching. Miss Sampson helped Professor Stapledon to establish the Welsh Plant Breeding Station at Aberystwyth and it was at Professor Stapledon's suggestion that she took up the study of the diseases of the pedigree grasses and other plants at the Station. These studies culminated in the two editions of the monograph by Sampson and **J. H. Western** (one of her former students), *Diseases of British Grasses and Herbage Legumes*, 1941, 1954. Smuts were one of Miss Sampson's special interests. She compiled a list of the Ustilaginales in the British Mycological Society's census of British fungi and devoted her presidential address (1938) to that Society to the life cycles of smuts. She published a series of papers (two with Western) on the biology of oat smuts and the climax of this interest was *The British Smut Fungi (Ustilaginales)*, 1950, with G. C. Ainsworth. She also published on *Olpidium* and *Cladochytrium* on grasses, the *Lolium* endophyte, and *Kabatiella* on red clover. See also **D. W. Davies**. *TBMS 75: 353, port., 1981.*

SAMUEL (Geoffrey; 1898-1985), plant pathologist, was an Australian, lecturer in plant pathology at Adelaide University and plant pathologist at the Waite Agricultural Research Station when, in 1930, with J. G. Bald and H. A. Pittman, he was the first to describe spotted wilt of tomato. In 1933 he came to England as mycologist at Rothamsted Experimental Station and later became mycologist (from 1944 plant pathologist) at the Ministry of Agriculture's Plant Pathology Laboratory, Milton Road, Harpenden (1937-48). In 1948 he was transferred to the Agricultural Research Council to organize their potato work and subsequently took charge of the Entomology and Mycology Division as Scientific Assistant to the Secretary of Agriculture - a post he held until his retirement in 1962. See also **A. E. W. Boyd**.

SANDERSON (Arthur Rufus; 1877-1932), (b. Bradford; d. Austwick, Yorks.), was a

keen member of the Bradford Natural History Society. In 1916 he published in *The Naturalist* on *Brefeldia maxima* and in 1918 on the myxomycetes of the Austwick district. He became mycologist to the Rubber Research Institute of Malaya when he published on Malaysian myxomycetes and also collected birds and insects. *Proc. LS* 1932-3: 200-1; *SC* 5: 31; *D*: 541.

SAUNDERS (James; 1839-1925), ALS (1900), amateur botanist, was born at Salisbury, Wilts., and from 1859 lived at Luton, Beds. A bookseller, later engaged in straw hat and bonnet manufacture, Saunders was particularly interested in mosses and liverworts and then turned his attention to myxomycetes publishing lists for Bedfordshire and the Midlands (see Ainsworth & Waterhouse (1989): 4) and Hertfordshire (*Victoria History of the Counties of England, Hertfordshire* 2: 76, 1902). A nonconformist; 'he was a preacher and lecturer of much charm'. *Proc. LS* 1924-5: 81-2; *J. G. Dony, Flora of Bedfordshire, 1953: 27-8; D: 544. (BB: 269).*

SAUNDERS (William Wilson; 1809-79), FLS (1833), FRS (1853), treasurer of the Linnean Society, 1861-73, and secretary of the Royal Horticultural Society, 1865-6, was a Lloyd's underwriter. He was the author (with **Worthington G. Smith**) of *Mycological Illustrations*, 1871-2. His fungus drawings are at **BM**. *DNB* 2: 1858; *D: 544 (BB: 269).*

SAVILL (Agnes Forbes (née Blackadder); 1875-1964), dermatologist. Qualified from Glasgow (MD, 1901) and later became physician to St John's Hospital for Skin Diseases and the Skin Department of South London Hospital for Women. Author of *The Hair and Scalp*, 1935 (edn 5, 1962). *BMJ* 1964 1: 1515; *Lancet* 1964 1: 1170; *Brit. J. Derm.* 76: 445-6, 1964.

SCHOFIELD (Wing-Commander Christopher H.; 1901-83) was an amateur naturalist of wide interests. He graduated from Sandhurst, had a career in India, and after the Second World War retired from the Royal Air Force to Worth Maltravers, Dorset. He joined the BMS in 1957 and was a regular and popular attender at the Society's forays. *Bull. BMS* 17: 156-7, 1983.

SCHWARTZ (Ernest Justus; 1870-1939) was born at Woodford, Essex, and graduated first in mathematics at King's College, London, and then from St Catherine's College, Cambridge. He became lecturer in mathematics at Carlyn College, Chancery Lane, London, and in 1900 gained first class honours in botany from King's College (DSc, 1914) where he joined the College staff and was appointed lecturer in 1919. He specialized in the Plasmodiophorales (see *Ann. Bot.* and with **W. R. I. Cooke** detailed the life history of *Plasmodiophora brassicae* (*Phil. Trans.* B 218: 283-314, 1930). *Proc. LS* 1939-40; 374-5; *D: 546.*

SCOTT (Dukinfield Henry; 1854-1934), paleobotanist, was a son of Sir George Gilbert Scott, the Victorian architect. At Oxford (Christ Church) he read classics but his real interest was in botany. After gaining a doctorate under Julius von Sachs in Germany, he held posts at University College and the Royal College of Science in London, and was Honorary Keeper of the Jodrell Laboratory of the Royal Botanic Gardens, Kew, from 1896 to 1902. He was elected FRS in 1894. His one important contribution to mycology was the account of fungi in his *Structural*

Botany, Vol.2, *Flowerless Plants*, 1896, which was in print for a generation (from the 11th edition (1926) onwards **F. T. Brooks** became the joint editor) and provided a first introduction to fungi for many students. Scott's daughter, Violet Gertrude, married **S. P. Wiltshire**. See also **A. L. Smith**, **H. M. Ward**. *DNB*: 2: 2877; *SC* 5: 457; *D*: 547.

SCOTT (Reynold (or Reginald); 1538?-1599). Born in Kent where, after marriage in 1538, he spent the rest of his life. He is particularly remembered for his writings against witchcraft but among other publications was *A Perfite Platforme of a Hoppe Garden, and Necessarie Instructions for the Making and Mayntenance Thereof*, 1574, which included the first description of nettlehead of hops (see Ainsworth (1981) 81). *DNB* 2: 1873.

SHARPLES (Arnold; 1887-1937), tropical plant pathologist, was a Lancashire man and graduated in geology and mineralogy, and then botany, at the Royal College of Science (1908-12). He next spent two months at Kew under **G. Masee** and **E. M. Wakefield** and a short time in Germany before being appointed (in 1913) assistant mycologist to the Department of Agriculture, Federated Malay States, where he became mycologist in 1916 and stayed (apart from army service in the Royal Engineers in Mesopotamia during the 1914-18 war) until 1930 when he was seconded to the Rubber Research Institute of Malaya as Head of the Plant Pathology Division and acted as head of the Institute for a time. He returned to England in 1934. The pathology of *Hevea* was his special concern but he was also interested in diseases of coconut and other palms. He is best remembered for his book, written after retirement, *Diseases and Pests of the Rubber Tree*, 1936. *Nature* 140: 494, 1937; *D*: 552.

SHAW (Frederick John Freshwater; 1880-1936), DSc (Lond., 1916), FLS (1911), CIE (1936), tropical plant pathologist, was educated at St Olaves School, London, graduated from the Royal College of Science, and spent his working life in India. He was in turn Supernumary Mycologist at Pusa (1910-13), Government Mycologist, Madras (1913-5), Imperial mycologist, Agriculture Research Institute, Pusa (1934-6), and supervised the move of the Institute to Delhi after the Bihar earthquake of 1934. His investigations covered diseases of jute, fruit-trees, pigeon-pea and other pulses, and a variety of tropical crops. He died in Agra from a stroke. *Nature* 138: 317, 1936; *Kew Bull.* 1936: 93; *WWW (1929-40)*: 1225; *D*: 552.

SHENSTONE (James Chapman; 1854-1935), contributed the lichens of Essex to the *Victoria History of the Counties of England*, 1903. *D*: 554.

SHERARD (James; 1666-1738), FRS (1706), London apothecary and botanist, was the brother of **W. Sherard**. See **J. J. Dillenius**. *DNB* 2: 1911; *D*: 555 (*BB*: 274).

SHERARD (William; 1659-1728), botanist, was born at Bushby, Leices., graduated in common law from Oxford (St John's College) in 1683, and then went abroad spending 1686-8 in Paris where he studied under Tournefort. Returning to England he acted as a tutor, was consul at Smyrna, 1703-16, elected FRS, 1720, and spent the rest of his life in London where he died and was buried at Eltham

where his brother **James Sherard** lived. He brought **J. J. Dillenius** (q.v.) to England, and endowed the Sherardian chair of botany at the University of Oxford to which he bequeathed his library and herbarium. See also **J. Dandridge**. *DNB 2: 1911; DSB 12: 394-5; SC 5: 559; D: 555 (BB: 274)*.

SHIPLEY (Sir Arthur Everett; 1861-27), GBE (1920), zoologist, after graduating with honours at Cambridge University (Christ's College) (1882, 1884) was in succession university demonstrator, lecturer, and finally reader in zoology until 1920 when he continued to live in Cambridge. He was elected a fellow of Christ's College in 1887, became master of the College in 1920, and for 1917-19 was vice-chancellor of the University. Shipley's one excursion into plant pathology was in 1887 when he was sent by the Colonial Office to Bermuda to investigate an outbreak of downy mildew (*Peronospora destructor*) of onion on which he published a report in the *Kew Bull.* 1887 (10): 1-22). He remained in contact with the Colonial Office for the rest of his life and among the many committees on which he served were the managing committee of the Imperial Bureau of Entomology and the governing body of the Imperial College of Tropical Agriculture, Trinidad, of which as chairman he laid the foundation stone of the new College. *DNB 2: 2885-6; SC 5: 585*.

SHIRLEY (John F. S.; 1849-1922), BSc (Lond.), DSc (Sydney, 1912), b. Dorchester, became a school teacher in Birmingham. He emigrated to Queensland in 1878 where he was a school inspector, etc. He was president of the Royal Society of Queensland, collected Queensland plants, and was the author of *The Lichen Flora of Queensland* (*Proc. R. Soc. Queensland* **5, 6**, 1888-89). *SC 5: 567; D: 556*.

SIBBALD (Sir Robert; 1641-1722) was born in Edinburgh. At first studied theology with a view to entering the church but changed to medicine and studied abroad qualifying MD at Leyden (1660) and also Angers (1662). In 1685 he was appointed the first professor of medicine at Edinburgh University but in the same year became a convert to Catholicism, had his house broken into by a mob, and had to leave Edinburgh. However, later he recanted and returned there where he died.

Sibbald published *Scotia Illustrata Sive Prodrromus Historiae Naturalis*, 2 vol., 1684. Vol. 2 deals with plants and includes 5 species of fungi (*Agaricus campestris*, *Lycoperdon giganteum*, *Auricularia auricula-judae*, *Fomes ignarius*, and *Phallus hadrianus* in today's terminology) which are accepted as the first printed record of Scottish fungi. With A. Balfour, founded the Edinburgh Botanic Garden ca 1667. *DNB 2: 1920-1; SC 5: 577; D: 558 (BB: 275)*.

SIBTHORP (John; 1758-96), MA (Oxon., 1780), MD (1784), FLS (1788), FRS (1788), was professor of botany at the University of Oxford, 1783-95. He included fungi and lichens in his *Flora Oxoniensis*, 1794. *DNB 2: 1921; D: 558 (BB: 275)*.

SIDNEY (Rev. Edwin; 1797-1872), BA (Cantab., 1841), was rector of Cornard Parva, Suffolk. He wrote *Blight of Wheat and Their Remedies*, 1846 (London), a few copies of which are illustrated by 16 specimens. *D: 559 (BB: 275)*.

SIMS (Anthony Peter; 1933-90), biochemist, was lecturer in botany at Bristol University

where, with B. F. Folkes, he studied the metabolism of *Candida utilis* and later became lecturer (1967), then reader (1974), in biology at the University of East Anglia. *The Independent*, 3 August 1990.

SINCLAIR (Sir John; 1754-1835), DCL (Glasgow, 1788), FRS (1784), FLS (1810) was the first president of the Board of Agriculture. He was a prolific writer and the author of *On Diseases of Wheat*, 1800, and *Inquiry into Blight*, 1809. *DNB 2: 1931; D: 562 (BB: 277)*.

SKEPPER (Edmund; 1825-67), see Henslow, S. J. *Skepperia* Berk.(1857) and *Skepperiella* Pilat (1927) were named in his honour. *SC 5: 627; D: 562 (BB: 277)*.

SLOANE (Sir Hans; 1660-1753), London physician and naturalist, although not a mycologist made extensive collections of books (over 5,000), manuscripts (3,500 bound volumes), and a valuable herbarium (of 337 folio volumes) containing many early collections of lichens and fungi. These collections became the nucleus of the British Museum. The herbarium is now at the Natural History Museum (**BM**). Sloane was president of the Royal College of physicians, 1719, president of the Royal Society, 1727-40, and he gave the Chelsea Physic Garden to the Apothecaries' Company. See also **A. Buddle**, **S. A. Reynardson**. *DNB 2: 1937; DSB 12: 456-9; SC 5: 645; D: 563 (BB: 278)*.

SMALL (Tom), ARCSc, MSc (Lond.), PhD (Lond.), OBE (1953), plant pathologist, worked at the Experimental & Research Station, Cheshunt, 1924-30, investigating *Rhizoctonia* foot-rot of tomato (*AAB 14*, 1926), *Cladosporium* leaf mould of tomato (*AAB 17,18*, 1924-5), and other topics. He then became mycologist to the States Experimental Station, Glenham, Trinity, Jersey, 1931-40, 1945-54, spending the war years working with an ARC grant on potato diseases at Manchester University.

SMALL (William), MA, BSc, PhD (St Andrews), FLS, plant pathologist was Government botanist in Uganda (1913-20), then mycologist (see *TBMS*, **9, 10, 11, 13**, 1924-8), and succeeded **T. Petch** in Ceylon in 1925.

SMIETON (Miss M. J.; d. 1984), BSc, trained in horticulture and plant pathology, worked at the Imperial College as research assistant to **W. Brown** during the 1930s. She was then subsidised for a number of years up to 1937 by Bayers Products Ltd. to work on diseases of spring lettuce and in 1938 received an ARC grant to continue the work.

SMITH (Alexander; 1894-1948), plant pathologist, a farmer's son, was educated at Peterhead Academy and Aberdeen University (1913-6, 1919-21; interrupted by war service in the Royal Engineers). After a year at Aberdeen Training Centre, he acquired a Cambridge PhD under **F. T. Brooks** and then spent 1926-7 as assistant lecturer in botany at Aberdeen University before being appointed assistant in mycology at the Ministry of Agriculture's Plant Pathology Laboratory, Harpenden, where he remained (1928-48) until his death by coronary thrombosis. Smith's PhD topic was perennial mycelium in rust fungi, a group for which he had a liking. He regularly attended forays of the British Mycological Society and was a perceptive field worker with a keen eye for rusts and other microfungi. *Trans*

Herts. Nat. Hist. Soc. **23**: 85, 136, 1950-1; *D*: 565.

SMITH (Annie Lorrain; 1854-1937), mycologist and lichenologist, 'was a woman of extraordinary wide interests and sympathy'. She was born in Dunfriesshire of an intellectual family and studied in Germany and France and was a governess for a time before taking up botany under **D. H. Scott** at South Kensington. On becoming assistant to **W. C. Carruthers**, keeper of botany at the British Museum (Natural History), in his capacity as botanist to the Royal Agricultural Society she was associated with early work on seed testing (*TBMS* **1**, 1902) and she arranged the exhibits of microfungi at the Museum. She was president of the British Mycological Society for 1907 when she devoted her presidential address to microfungi on which she wrote many papers. Miss Smith is now best remembered as a lichenologist. She undertook the arrangement of the lichens at the Museum and wrote a second volume of *A Monograph of the Lichens Found in Britain* (1911) begun by **J. M. Crombie** (1894) and later re-wrote the first volume (1918). This became a standard text which Miss Smith began to revise but only completed the first volume (1926). She summarized the monograph in *A Handbook of the British lichens*, 1921, which took the form of a key, and her best known work, *Lichens* a comprehensive general textbook for students was also published (by Cambridge University Press) in 1921. In 1934, after she had given up work on the onset of a long terminal illness, she was awarded the OBE. See also **P. Highly**. *Times* 14 Sept. 1937; *Proc. LS* **150**: 337-9, 1938; *Hawksworth & Seaward* (1977) 26, 28 (*port.*), 29; *SC* **5**: 663; *D*: 565.

SMITH (Rev. Colin; fl. 1820s-1850s) of Inverary, Argyll, sent lichens to **W. J. Hooker**. *D*: 566 (*BB*: 279).

SMITH (F. Percy; d. 1945), a free-lance maker of natural history films which were distributed by Gaumont British. His films included 'Slime Fungi (Magic Myxos)', 1932, and 'Life Cycle of the Pin Mould', 1942. *D*: 566.

SMITH (George; 1895-1967), a chemist by profession, was a self-taught mycologist who in 1930 joined **H. Raistrick's** team of biochemists at the London School of Hygiene & Tropical Medicine where he became mould taxonomist to the group. He took over **J. T. Duncan's** course on industrial mycology and in the light of these experiences published *Introduction to industrial mycology*, 1931 (illustrated by photomicroscopy at which Smith was an expert), a helpful text for the identification of common moulds. It was much appreciated and the 6th edition, seen through the press by two former research students, came out in 1969. Born in Great Harwood, Lancs., Smith graduated from Manchester University in 1916 and gained a MSc two years later. His first post was with a textile firm at Great Harwood from where his first publications were on textile chemistry but his main interest soon became moulds causing mildew in cotton fabrics (see **L. E. Morris**). From the LSHTM he published monographs on *Paecilomyces* (with Agnes H. Brown) and *Scopulariopsis* (with F. J. Morton). George Smith took an active interest in collecting larger fungi and he was a familiar figure at fungus forays in his Harris tweed suit, collecting basket, and stout walking stick. He became Foray

Secretary of the British Mycological Society (1947, 1951-2) and was President for 1945. He was a competent musician (organizing lunch-time gramophone recitals at the School) and a good cook (George, his wife, and two teenage sons took turns to do the cooking). *Nature* **215**: 109, 1967; *TBMS* **50**: 339-40, *port.*, 1967; *Mycologia* **60**: 991-3, 1968; *SC* **5**: 671; *D*: 567.

SMITH (Sir James Edward; 1759-1828), botanist, was born at Norwich, the son of a wealthy nonconformist wool merchant. He is famous for: (i) at the instigation of Sir **Joseph Banks**, purchasing the collections and library of Carl Linnaeus from Linnaeus's widow in 1784 and founding the Linnean Society of London of which he was the first president (1788-1828); (ii) publishing, with **J. Sowerby** (q.v.) *English Botany* for which he wrote the text. He was elected FRS, 1785, and knighted, 1814. See also **M. J. Berkeley**, **J. Crowe**, **C. Lyell**. *DNB* **2**: 1945; *DSB* **12**: 471-2; *Hawksworth & Seaward* (1977): 9, *port.*; *M. Walker, Sir James Edward Smith ...*, 1988 (London, Linn. Soc.); *SC* **5**: 672; *D*: 568 (*BB*: 280).

SMITH (John Henderson; 1875-1952), plant pathologist, qualified for medicine at Oxford (Balliol College) (BA, 1888) and Edinburgh (MB, ChB) and became assistant bacteriologist at the Lister Institute, a post from which he resigned in 1916 due to ill health. He became assistant mycologist at Rothamsted Experimental Station (where he studied the effects of phenol on fungal spores) and was from 1929-32 head of a group studying aspects of virus diseases of plants (see **J. Caldwell**). Finally he succeeded **W. B. Brierley** as head of the Department of Plant Pathology at Rothamsted (1933-40). He was president of the Association of Applied Biologists for 1936-7. A hobby was collecting book plates. *Times* **2 Dec.** 1952; *Nature* **171**: 16, 1953; *D*: 569.

SMITH (Kenneth Manley; 1892-1981), CBE, FRS, entomologist, was a leading plant virologist with an international reputation. After service with the London Scottish Regiment during the First World War, Smith was invalided out and became lecturer in agricultural entomology at Manchester University. When the Potato Virus Research Station of the School of Agriculture, Cambridge University, was founded under the Direction of **R. N. Salaman**, Smith was appointed to the Station as entomologist in 1927 and eventually succeeded Salaman as director. His output of papers and books, both technical and popular, was vast and here mention can only be made of *A Textbook of Plant Virus Diseases*, 1937 (edn 6, 1977), which was much used. After retirement he stayed on at the Virus Research Unit (as it was then known) until he was 70 when he moved to the United States to work at Pittsburg and then at the Botany Department of the University of Texas at Austin. *Biog. RS* **28**: 451-77, *port., bibl.*, 1982; *Times* **12 June**, 1981.

SMITH (Noel James Gillies; b. 1899), BSc (Edinb.), MA, PhD (Cantab., 1926), FLS (1934), was the eldest son of **William G. Smith** of Edinburgh. After a post as assistant in botany at Aberdeen University he was professor of botany at Rhodes University College, Grahamstown, South Africa (1926-48). During 1940 he underwent military service (in the artillery). He published on cereal diseases and the fungi of South Africa. His problem was drink. *D*: 569.

SMITH (William Gardner; 1866-1928) was born in Dundee, graduated from St Andrews, and had his interest in fungi aroused under Karl von Tubeuf at Munich where he gained a PhD for a thesis entitled, 'Untersuchung der Morphologie und Anatomie der durch Exoascen versuchten Spross-und Blatt-Deformationen', which was translated into Italian. He is best known for his own English translation of Tubeuf's textbook on plant disease as *Diseases of Plants Induced by Cryptogamic Parasites*, 1897. Smith then turned his attention to other topics and teaching. In 1908 he became head of the East of Scotland College of Agriculture and the year before his death was appointed advisory officer in agricultural botany to the Board of Agriculture for Scotland. He was a founder member of the British Ecological Society (President, 1917, Honorary Member). **N. J. G. Smith** was his eldest son. *J. Bot.* 1929: 53-6, *port.*; *SC* 5: 704; *D*: 570.

SMITH (Worthington George; 1835-1917), trained as an architect, became a skilled wood engraver and decided on a career as a book illustrator, regularly contributing to *The Builder* for more than twenty years and for forty years from 1869 was the chief illustrator of the *Gardeners' Chronicle*. A Londoner by birth, he moved to Dunstable in 1885 where he lived for the rest of his life making extensive studies of the local paleolithic sites and writing two books on Dunstable and its history and an account of Bedfordshire for the 11th edition of the *Encyclopaedia Britannica*. From the eighteen-sixties he developed a deep and life-long interest in fungi - an interest stimulated by initially poisoning himself and his family with *Entoloma lividum*. He regularly attended the annual forays of the Woolhope Club (see **H. G. Bull**) of which he frequently made humorous reports in the *Gardeners' Chronicle* and a series of cartoons in various periodicals. He also designed and engraved a menu card for the dinner (at which fungi were always served) at the Green Dragon, Hereford, at the conclusion of a Woolhope Club foray. In appreciation of his work for that Club, at the dinner of 1874 Smith was presented with 48 pieces of cutlery every fork and spoon being engraved with a different fungus copied from one of his drawings. Smith's first independent publication was two large folding sheets of coloured illustrations of edible and poisonous fungi, mounted on canvas, together with an explanatory booklet, prepared for the publisher Hardwicke in 1867. In 1875 he became temporarily notorious for claiming to have discovered the winter spores (oospores) of the potato blight fungus until Anton de Bary exposed the error. This did, however, give Smith the reputation as an expert on plant disease and in 1884 his little illustrated book *Diseases of Field and Garden Crops* appeared but here again he was out of touch with the current work and perpetuated the error that the stages of *Puccinia graminis* on wheat and barberry were different species. As an agaricologist he was more reliable. In 1886 he renovated **J. Sowerby's** models of British fungi at the Natural History Museum and wrote the Museum's guide to the models published in 1893, and in 1908 a more extended account of the larger British fungi (*Synopsis of the British Basidiomycetes*). It was the *Guide* (supplemented by illustrations from the *Synopsis*) that was revised and re-written

by **John Ramsbottom** in 1923 and proved so popular. Smith also illustrated Stevenson's 2-volume *Hymenomycetes Britannici*, 1886, published *Clavis Agaricinorum, an Analytic Key to British Agaricini*, 1870, *Supplement to Berkeley's Outline of British Fungology*, 1891, together with some 200 articles on fungi and plant diseases. A Foundation Member of the British Mycological Society he was president for 1904 but because of ill health did not give a presidential address. *TBMS* 6: 65-7, 1918; *Beds. Historical Record Soc.* 57: 141-79, 1978; *Mycologist* 4: 32, *port.*, 1990; *SC* 5: 706; *D*: 571 (*BB*: 282).

SOLLY (Edward; 1819-86), FLS (1842), FRS (1843), chemist and antiquary, was honorary professor of chemistry to the Horticultural Society of London, and author of 'On seed-steeping' (*Trans. Hort. Soc. Lond.* 3: 197-210, 1848). *DNB* 2: 1957; *D*: 573 (*BB*: 282).

SOMERVILLE (Sir William; 1860-1932), BSc (Edinb., 1887), FLS (1891), KBE (1926), agriculturalist, was assistant secretary to the Board of Agriculture (1901-6), then professor of rural economy at Oxford University (1906-25). He was a prolific writer and translated into English R. Hartig's *Text-book of the Diseases of Trees*, 1894 (with a preface by **H. M. Ward**). He was twice president of the Arboricultural Society (1900, 1922). *DNB* 2: 2897; *D*: 573.

SOPPITT (Henry Thomas; 1858-99), drysalter, was a Yorkshireman (b. Bradford, d. Halifax) who became interested in natural history, first butterflies and flowering plants, then fungi, especially rusts. He published a number of articles and was an active member of the Yorkshire Naturalists' Union and a Foundation Member of the British Mycological Society. *TBMS* 1: 83-5, *port.*, *bibl.*, 1899; *Blackwell* (1961): 54; *SC* 5: 749; *D*: 574 (*BB*: 283).

SOWERBY (James; 1757-1822) is especially remembered by mycologists for one work, his *Coloured Figures of English Fungi or Mushrooms*, comprising 440 hand-coloured engravings together with a text by the artist, in 3 folio volumes issued in parts between 1795 and 1815 (dates of publication, *TBMS* 18: 167-70, 1931), and still the most beautiful set of illustrations of the larger fungi of this country. James Sowerby was born in London, trained as an artist, and became a teacher of drawing and a portrait painter. His interest in natural history and his drawings of flowers led him to illustrate many and diverse books on natural history of which the most famous is *English Botany*, (1790-1814) (with **J. E. Smith**; in 36 vols containing 2500 hand-coloured plates), but his interests were wide and he also produced illustrated works on mineralogy and fossil shells. *The Figures of English Fungi* was intended as a supplement to *English Botany*, which included algae and lichens but not fungi, and to supplement the illustrations Sowerby prepared some 200 models of larger edible and poisonous fungi which he exhibited in his house in Lambeth and opened to the public, free of charge, two days each month. These models were later acquired and exhibited by the British Museum (Natural History) and were the basis of the well-known Museum handbooks by **Worthington G. Smith** and **J. Ramsbottom**.

During the closing years of the eighteenth century and the early years of

- the nineteenth fungal decay of warships became a major naval problem both of ships in service and even under construction. Sowerby was called on for advice (as some years later was the Rev. **M. J. Berkeley**) when he made various recommendations including the procedure for stacking stocks of timber in naval dockyards. James Sowerby had nine children. The production of hand-coloured plates developed into a family business involving the whole family of which several members (and their progeny) became botanical artists - see **J. E. Sowerby** and **J. Sowerby** (1815-34). See also **T. F. Foster**, **C. Lyell**, **T. Purton**, **J. Salt**, **A. Stone**, **R. Teesdale**. *DNB 2: 1965*; *J. Soc. Bibliogr. Nat. Hist 6: 380-559, 1974* (*Sowerby family*); *SC 5: 759*; *Mycologist 2: 125, port., 1988*; *D: 575* (*BB: 284*).
- SOWERBY** (James; 1815-34). Son of James de Carl Sowerby (1787-1871), grandson of **J. Sowerby** (1757-1822). Wrote and illustrated *The mushrooms and Champignons Illustrated*, 1832. *SC 5: 762*; *D: 575*.
- SOWERBY** (John Edward; 1825-70). Botanical artist. Son of Charles Edward Sowerby (1795-1842), grandson of **J. Sowerby** (1757-1822). Illustrated M. C. Cooke's *Rust, Smut, Mildew, and Mould*, 1865. *DNB 2: 1965*; *SC 5: 763*; *D: 575*.
- SOWERBY** (William; 1827-1906), FLS (1872), son of J. De Carle Sowerby (1787-1871), engraved plates for **M. J. Berkeley** & **C. E. Broome**'s Notices of British fungi, 1864-5. In 1869 he succeeded his father as secretary of the Royal Botanic Society and Gardens, Regent Park, London. *D: 575*.
- SOWTER** (Frederick Archibald; 1899-1972), lichenologist and bryologist, was assistant sales manager at the Leicester Office of Courtauld's Ltd. Born and educated in Leicester Sowter served in the army in France and then Germany during the First World War and studied textile chemistry at University College, Nottingham, before joining Courtaulds from which he retired in 1958. Sowter's interests in natural history was encouraged by **A. R. Horwood** whom he helped with the preparation of Horwood & Gainsborough's *Flora of Leicestershire & Rutland*, 1933. He then turned to the study of the local bryophytes and in 1958 became president of the British Bryological Society. Next Sowter turned to lichenology and in 1950 published an account of the lichens of Leicestershire and Rutland when, encouraged by C. T. Ingold (then professor of botany at University College, Leicester), he published an account of the local myxomycetes. He was an active member of the Natural History Section of the Leicester Literary & Philosophical Society and a founding member of the British Lichenological Society which, in 1971, elected him to honorary membership. His specimens of lichens, myxomycetes, and bryophytes, together with his papers, are at the Leicester City Museum. See also **A. E. Wade**. *Lichenologist 5: 345-8, port., bibl., 1973*; *Watsonia 10: 114, 1974*; *SC 5: 764*; *D: 576*.
- SPRAGUE** (Thomas Archibald; 1877-1958), botanist, worked at the Royal Botanic Gardens, Kew, from 1900 and was deputy Keeper of the Herbarium, 1930-45. His one contribution to mycology was an account of the rusts of Gloucestershire (*Proc. Cotswold Nat. Field Club 31: 86-100, 1952*). *SC 5: 798*; *D: 577*.
- SPRUCE** (Richard; 1817-93) a Yorkshire schoolmaster then botanist and lichenologist

who assembled material for lichen exsiccati from collections made on his South American travels. *DNB 2: 1975-6; DSB 12: 594; Seaward (1987): 44; SC 5: 816; D: 578 (BB: 285).*

STANSFIELD (Abraham; 1802-80), a nurseryman of Todmorden, Yorks., who became president of the Todmorden Botanical Society in 1852. With **J. Nowell** wrote *Flora of Todmorden* (published posthumously in 1911) which includes a section of lichens. Stansfield's lichen specimens are lost. *Seaward (1987): 44; D: 580 (BB: 286).*

STANSFIELD (Thomas; ca 1826-1879) was a nurseryman of Todmorden, Yorks., who specialized in ferns. He contributed lichen records to W. B. Crump & **C. Crossland's** *The Flora of the Parish of Halifax*, 1904. *Seaward (1987): 44; SC 5: 859; D: 580.*

STEEL (Thomas; 1858-1925), b. Glasgow, chemist on the staff of the Colonial Refining Co., Sydney, Australia, collected fungi in New South Wales. *D: 581.*

STELFOX (Margarita Dawson (née Mitchell); 1886-1971), botanist, b. Lisburn, Co. Antrim, was the wife of the biologist Arthur W. Stelfox (1883-1922). Her speciality was myxomycetes (see *Irish Nat.*). *D: 582.*

STENHOUSE (John; 1809-80), FRS (1848), of Glasgow who became lecturer in chemistry at St Bartholomew's Hospital, London (1851-7) and assayer to the Mint (1865-70), published on the chemistry of lichens (*Phil. Trans.* **138**: 63-89, 1849; *Proc. RS 18*: 222-7, 1870). *DNB 2: 1992; D: 582 (BB: 287).*

STEP (Edward; 1855-1931), FLS (1896), a Londoner, was a writer on popular natural history and the author of *Toadstools and Mushrooms of the Countryside*, (1913). *WWW (1929-40): 1285; SC 5: 888; D: 582.*

STEPHENS (Henry Oxley; 1816-81), surgeon of Bristol, author of 'Mycology of Bristol', *Ann. Nat. Hist.* **4**: 246-53, 1840. *Stephensia* L. R. Tul & C. Tul., 1851 (Pezizales). *D: 582 (BB: 287).*

STEPHENSON (Greta B. (Mrs Cone); d. 1990), MSc (Otago), DIC, PhD (London), graduated in New Zealand where she studied the agarics. On emigrating to the UK she worked at the Imperial College under Professor **W. Brown** and later became lecturer in botany at the Crawley College of Further Education. She was the author of *The Biology of Fungi, Bacteria and Viruses*, 1967.

STEVENSON (Rev. John; 1836-1903), Scottish mycologist, was born at Coupar Angus, Perthshire, graduated from St Andrew's University, and nine years later was licensed to preach in the Established Church of Scotland and settled at Glamis (1873). He was an able mycologist and is remembered for his *Mycologia Scotica*, 1879 (a census of Scottish fungi which included many new records for the region), and the 2 volumes of *Hymenomycetes Britannici. British Hymenomycetes*, 1886. He was an active member (and one of the founders; see **J. Ferguson**) of the Cryptogamic Society of Scotland (and acted as secretary to 1903). In 1888 he was awarded a honorary LLD by St Andrew's University. His name is honoured in many specific epithets. *Ramsbottom (1963) 174; Mycologist 3: 45, port., 189; SC 5: 919; D: 584 (BB: 288).*

STIRRUP (Henry Harold; 1889-1963), MSc, after a period as lecturer in biology at the East Anglian Institute of Agriculture before the First World War, Stirrup was assistant agricultural inspector and then assistant mycologist to the Department of Agriculture of the Federated Malay States until 1919. From 1920 to his retirement in 1955 he was advisory mycologist at the Midland Agricultural College, Sutton Bonnington, and (from 1946) advisory plant pathologist to the East Midland Province of the National Agricultural Advisory Service. He published on the diseases of a variety of agricultural and horticultural crops.

STIRTON (James; 1833-1917), MD (Edinb., 1858), lichenologist, became professor of midwifery at St Mungo's College, Glasgow, and made contributions to W.A. Leighton, *Lichen Flora*, 1879, and published on British and exotic lichens. See also **R.H. Patterson**. *Hawksworth & Seaward* (1977): 23; *SC* 6: 3; *D*: 586 (*BB*: 289).

STOCK (Daniel; *fl.* 1820-1860), botanist and entomologist of Bungay, Suffolk, corresponded with **M. J. Berkeley** and was a friend of **M. C. Cooke** who, together with **W. Phillips**, published records of his mycological finds. *G. J. Cooke* (1937): 199; *D*: 586 (*BB*: 289).

STOCKDALE (Frank Arthur; 1883-1949), plant pathologist and agricultural administrator, graduated from Cambridge (Magdalen College) and succeeded **L. Lewton-Brain** as mycologist and agricultural lecturer, Imperial Department for the West Indies, where he investigated diseases of coconut and cacao but he soon abandoned plant pathology for an administrative career in British Guiana, Mauritius, Ceylon, and finally became vice-chairman of the Cotton Development Corporation and chairman of the Governing Body of the Imperial College of Tropical Agriculture, Trinidad. Awarded the CBE, 1925. *Nature* **164**: 397-8, 1949; *D*: 586.

STOCKDALE (Phyllis Margaret (Mrs Burrows); 1927-89) after graduating from Bristol was, supported by the Wellcome Trust and the Grocers' Company, introduced to dermatophytes and medical mycology at the University College of the South West, Exeter, and spent 1952-3 as research assistant at the Hospital for Sick Children, Toronto, Canada. Back in England, after serving as mycologist to the Printing & Allied Trades Association during 1954-5, she was appointed to the Mycological Reference Laboratory of the Public Health Laboratory Service and in 1960 moved to the Commonwealth Mycological Institute, Kew. There she edited the *Review of Medical and Veterinary Mycology* and continued her research on the sexuality of dermatophytes for which she gained an international reputation and was awarded the International Society for Human and Animal Mycology's Medal. She retired in 1987 having in 1985 married her blind organ teacher, Keith J. D. Burrows. **See P. Tate**.

STONE (Robert; 1751(?)-1829), FLS (1790), of Bedingham Hall, Bungay, Suffolk, was a founder member of the Bungay Botanical Society (1826), made the first record of *Hydnum imbricatum* for Norfolk, and contributed to *English Botany* (see **J. Sowerby** and **Withering's Arrangement of British Plants**). *J. G. Cooke* (1937):

199; D: 587 (BB: 290).

STOREY (Harold Haydon; 1894-1969), tropical plant pathologist (virologist), graduated from Cambridge where he was awarded a PhD for investigations during 1921-2 on silver leaf disease plum under the supervision of **F. T. Brooks**. Storey was then appointed mycologist in charge of Natal Herbarium, Division of Botany, Pretoria, South Africa, until he became plant pathologist at the East African Research Station, Amani, Tanganyika Territory where he later became deputy director under B. A. Keen. *Biogr. Mem. RS 15: 23-46, port., bibl., 1969; AAB 64: 188, port., 1969; D: 588.*

STOUGHTON (up to 1926 Stoughton-Harris; Raymond Henry; 1903-79), plant pathologist, horticulturalist, was educated at St Peter's School, York, and the Imperial College of Science (ARCS, 1923; BSc, 1924). Mycologist to the Rubber Research Institute, Ceylon (1924-26), assistant mycologist Rothamsted Experimental Station (1926-33), he then held the chair of horticulture at Reading University (1933-57) and was principal of the University College of Ghana (1957-61). He was awarded the VMH (1954) and an honorary LLD (Toronto). Stoughton published on a number of phyto-pathological topics and at Rothamsted devised controlled growth chambers for the study of black arm of cotton (*Xanthomonas malvacearum*), chambers which were later adapted by **A. R. Wilson** at Cambridge for his study of chocolate spot of broad beans (*Botrytis fabae*, *B. cinerea*). *Times 23 Nov. 1979.*

STRICKLAND (W.W.; fl. 1880s-1890s). Deposited specimens of '202 British and 88 foreign fungi, presented at various times, 1888-1895' to the Natural History Museum (fide *The History of the Collections Contained in the Natural History Departments of the British Museum 1: 185, 1904*). These specimens are now at the Royal Botanic Gardens, Kew (**K**).

SUTCLIFFE (Herbert; 1880-1930), FLS (1921), plant pathologist, was born at Bradford, Yorks., attended the Bradford Technical School and graduated from the Royal College of Science. His whole career was spent in Malaysia where he died. His first appointment, in 1913, was mycologist to the Malay Peninsular Agricultural Association, then he became (in 1917) mycologist and plant pathologist to the Rubber Growers' Association, Petalins, and finally joined the Rubber Research Institute of Malaya where, among other topics, he investigated diseases of the rubber tree (*Hevea brasiliensis*) and defects in crêpe and sheet rubber. *Proc. LS 1930-31: 198; D: 592.*

SWANTON (Ernest William; 1870-1958). For a generation from 1909, many mycologists, both amateur and professional, were introduced to the larger fungi via *Fungi and How to Know Them* by E. W. Swanton, 'Naturalist, Antiquarian and Historian', according to *The Times*, and curator of the Haslemere Educational Museum for fifty years. Swanton came of farming stock. He was born at Dibden, Hampshire and brought up in the West Country. In 1889 he turned to schoolmastering, later becoming a private tutor, and in 1897 was appointed curator of the Haslemere Museum founded, and financed during his life-time, by

the famous dermatologist, surgeon, and Quaker, Sir Johnathon Hutchinson, FRS, who in addition to the museum at Haslemere (near his country home) set up, with Swanton's help, a similar museum at Selby, Yorks., and initiated postgraduate medical teaching in London at the 'Polyclinic' in Chenies Street (the contents of which were finally bought by the John Hopkins Medical School, Baltimore).

Swanton's interests were wide and included molluscs, conchology, archaeology, plant galls, yew trees, local history, and the general fauna and flora. His interest in fungi was aroused in 1890 by reading **M. C. Cooke's** *Plain and Easy Account of British Fungi* and he arranged his first exhibition of larger fungi at the Haslemere Museum in September 1898. **C. B. Plowright** was impressed by the exhibition and at his suggestion Swanton joined the British Mycological Society becoming president (1916), Honorary Member (1947), and was one of the last surviving Foundation members. Two of the Society's autumn forays were held at Haslemere (1913, 1932), as was the spring foray of 1921, and based on the Museum. In 1931 Swanton led a foray at Haslemere for **W. H. Wilkins** and a party of Oxford University students (including **F. B. Hora**). This was repeated annually with successive generations of students up and resulted in a series of papers from Oxford on the ecology of the larger fungi (*Ann. Appl. Biol.*, **24-26**, 1937-9). During the first World War Swanton lectured to gardeners on plant diseases and during the Second, with **A. A. Pearson**, assisted Wilkins in a search for new antibiotics from larger fungi by sending collections (representing 816 species) for testing at Oxford. On retirement in 1948 Swanton was awarded the OBE and granted a Civil List Pension. He died at Twickenham. *Times* 23 Oct. 1958; *Nature* **182**: 1412, 1958; *Mycologist* **1**: 172-3, port., 1987; Swanton, *A Brief Autobiography*, port., 1958; *Memories and Notes*, port., 1958; *SC* **6**: 115; *D*: 595.

T

TABOR (Richard John; d. 1958), was educated at the Swanley Horticultural College and the Royal College of Science. He became lecturer at Swanley and then assistant professor of botany at the Imperial College of Science where he lectured on the systematics of fungi. He was a good teacher but published little. Married twice, his second wife was **Kate Barratt** with whom he published on *Bulgaria polymorpha* on beech (*Ann. Appl. Biol.* **4**: 20-7, 1917). Cf. **M. Wilson**.

TARR (Sydney Arthur John; 1918-90), plant pathologist and mycologist, was born and died at Exeter, Devon. Educated at Hele's School and the University College of the South-West, he graduated BSc (External Lond., in botany) in 1940 and subsequently became PhD (1952) and DSc (1965). From 1946-57 he was plant pathologist to the Sudan Republic and compiled *The Fungi and Plant Diseases of the Sudan*, 1955, IMI, Kew (supplement, *Mycol. Paper* **85**, 63pp., 1963). He then was lecturer in mycology and plant pathology (reader in mycology from 1965) at

the University of Exeter until his retirement due to ill health in 1975. While at Exeter he developed a 1-year MSc course in plant pathology and published *The Principles of Plant Pathology*, 1972.

TATE (Parr; 1901-85), Director of the Molteno Institute, Cambridge, 1953-68, and Reader in Parasitology of the University, was an Irishman. His only contribution to mycology dates from his early years at the Molteno Institute when he studied respiratory enzymes of dermatophytes and published a review of these pathogens (*Biol. Rev.* **4**: 41-75, 1929), supplemented by reviews in the same journal by **P. H. Gregory** (**10**: 208-13, 1935) and **Phyllis M. Stockdale** (**28**: 84-104, 1953.) *Times* 12 Nov. 1985.

TATUM (Edward John; 1851-1929), solicitor of Salisbury published on the Uredinales of Wiltshire, *J. Bot.* **35**: 295,297, 1897.

TAYLOR (Samuel; fl. 1800-50), of Moston, Manchester, and Bungay, Suffolk, published on smut of wheat (*Tilloch Philos. Mag.* 1822: 350-3 ; *Gard. Chron.* 1846: 242-3) advocating control by a copper sulphate steep. *D*: 601 (*BB*: 297).

TAYLOR (Thomas; ca 1787-1848), BA (Dublin, 1807), MD (Dublin, 1814), became professor of botany at Cork Scientific Institution. His contribution to J. T. MacKay, *Flora Hibernica*, 1836 'must rank as the first major listing of the Irish lichen flora' (Hawksworth & Seward (1977): 15). See also **J. Templeton**. *DNB* **2**: 2055; *Muskett* (1976): 397; *SC* **6**: 190; *D*: 601 (*BB*: 297).

TEESDALE (Robert; ca 1740-1804), was, like his father, gardener at Castle Howard, Yorks. He listed lichens and 33 Yorkshire fungi in his *Plantae Eboracenses; or a Catalogue of the more Rare Plants which Grow Wild in the Neighbourhood of Castle Howard ...* (*Trans Linn. Soc. Lond.* **2**, 1794; supplement, *ibid.* **5**, 1800). He contributed some lichens to **Sowerby's English Botany**. *Seaward* (1987): 39; *SC* **6**: 199; *D*: 602 (*BB*: 297).

TELLAM (Richard Vercoe; 1826-1906) was a Cornish farmer who published lists of lichens of East and West Cornwall. His herbarium is at Truro. *Hawksworth & Seaward* (1977): 24,158; *D*: 603 (*BB*: 298).

TEMPLETON (John; 1766-1825), a leading Irish field naturalist who lived at Cranmore, Co. Antrim. According to *Muskett* (1976: 397), Templeton's 'Catalogue of (232) species of fungi obtained in the North of Ireland' (published by **T. Taylor**, *Annals of Natural Hist.* **5**, 1840) 'represents the first scientific approach to taxonomic mycology in Ireland'. Templeton's drawings and papers are at the BM(NH). *DNB* **2**: 2061; *Hassell* (1957): 117; *SC* **6**: 208; *D*: 603 (*BB*: 298).

THEOBALD (Frederick Vincent; 1868-1930), MA (Cantab.), VMH (1926), entomologist, worked at the Natural History Museum (1900-3) and was subsequently professor of agricultural zoology at London University. Author of *Enemies of the Rose*, 1908 (edn 2, 1938, with **J. Ramsbottom**). *Nature* **125**: 607-8, 1930; *D*: 604.

THIN (George; d. 1903). Scottish physician. Practised at Penicuik, spent 1866-73 in Shanghai, and then, until 1903, specialized in tropical diseases (especially sprue

on which he wrote a book - *Psilosis or Sprue*) in London. Author of *Pathology and Treatment of Ringworm*, 1887. Died at Nice. *BMJ* 1904 **1**: 221, 346, 412; *Lancet* 1904 **1**: 474.

THISELTON-DYER (Sir William Turner; 1843-1928), BA (Oxon., 1867), BSc (Lond., 1870), FLS (1872), FRS (1880), CMG (1882), CIE (1892), KCMG (1899), botanist. After holding chairs at the Royal Agricultural College, Cirencester (1868, natural history), Royal College of Science, Dublin (1870, botany), Royal Horticultural Society (1872, botany), he became, in 1875, Assistant Director at the Royal Botanic Gardens, Kew, where he succeeded **J. D. Hooker** as Director (1885-1905). During 1872-76 Thiselton-Dyer assisted **T. H. Huxley** with the latter's summer courses for teachers at South Kensington; introduced the 'new botany', and emphasized microscopic techniques. As he himself wrote - '... we succeeded in showing shoals of things that had never been seen in England before ... No one had ever seen in this country an active plasmodium of a myxomycete ...' (fide *Biologist* **37**: 148, port., 1990). As supervisor of the Jodrell Laboratory at Kew he influenced both **D. H. Scott** and **H. Marshall Ward**. *DNB* **2**: 2923-4; *DSB* **13**: 341-4; *Proc. RS B106* : xxiii-xxix, 1930; *SC* **6**: 264; *D*: 605.

THOMPSON (Percy George; 1866-1906), architect, was secretary of the Essex Field Club and editor of the *Essex Naturalist*. With **R. Paulson**, listed the lichens of Epping Forest (*Essex Nat.* **16**, **17**, **19**, 1911-20). *Essex Nat.* 1954: 211-2, port.

THORNHILL (John; fl.1800-50), naturalist of Gateshead, Durham. See **N. J. Winch**. *Gilbert* (1980): 333, 334; *D*: 610 (*BB*: 300).

THRELKELD (Rev. Caleb; 1676-1729), MA (Glasgow), MD (Edinburgh), a nonconformist minister, was born in Cumberland and in 1713 settled in Dublin where he preached in a conventicle on Sundays and practised as a physician during the week but later he joined the established church. A keen botanist and collector, he was the author of *Synopsis Stirpium Hibernicarum*, 1727, which includes 16 fungi, the first mycological records for Ireland (see Muskett (1976): 395-6) and 5 lichens. Threlkeld's fungal records were reprinted by W. Harris in *Ancient and Present State of the County of Down*, 1744 (fide Muskett (1976): 396). *DNB* **2**: 2083; *Hassell* (1957): 117; *SC* **6**: 300; *D*: 611 (*BB*: 301).

THWAITES (George Henry Kendrick; 1812-82), FLS (1854), FRS (1865), CMG (1878), botanist was born in Bristol and after serving as secretary of the Botanical Society of London from 1839 became superintendent (1849) and then director (1857-80) of the Botanic Gardens, Peradeniya, Ceylon. His many collections of fungi, including the first specimens of *Hemileia vastatrix* B.& Br. (1869) (the cause of leaf disease in coffee (see **H. M. Ward**) which Thwaites considered could not be eradicated), were identified by **M. J. Berkeley** and **C. E. Broome** and some of his lichen collections by **W. A. Leighton**. *DNB* **1**: 2086; *D*: 612 (*BB*: 381).

THWAITES (W. A.; fl. ca 1900) was a gamekeeper and joiner on the Swinton Estate, Marsham, Yorks., who supplied much material ('I sent off a box (of specimens) every night by post from August to some time in November') to **C. Crossland** (for

the *Fungus Flora of Yorkshire*) and helped **G. Masee** with his study on larch disease for the Board of Agriculture (Blackwell (1961): 65-6). *Blackwell* (1961): 65-6; *Mycologist* 2: 165, 1988; D: 612.

THYNNE, Louisa, see Aylesford, Countess of.

TIGHE (William; 1766-1816) in *Statistical Observations Relative to the County of Kilkenny*, 1802, noted the use of brining (cf. **J. Tull**) or urine for the control of wheat bunt and also the occurrence of mushrooms and morels. *Muskett* (1976): 397; D: 613 (BB: 301).

TISDALL (Henry Thomas; 1836?-1905), FLS (1883), b. Waterford, Republic of Ireland, mycologist. Emigrated to Australia (1858) where he was schoolmaster (to 1894), then lecturer in botany at Teachers' College of Victoria. Fungi at Kew (**K**), plant drawings at Melbourne (**MEL**). D: 613 (BB: 201).

TOPPING (Muriel Phyllis (née Hall); 1903-63), who was educated at Peckham Girls' School and graduated with first class honours in botany from the Royal Holloway College in 1924, made a double contribution to British mycology. After graduating she spent a few years teaching and then gained a PhD at the Imperial College of Science under Professor **W. Brown** where she succeeded Lilian Hawker as his assistant lecturer, a post she relinquished on her marriage to James Topping, lecturer in mathematics at ICS. She returned to university work during 1946-58 working part time in the department of botany at the Royal Holloway College, where she developed the microbiology, and as lecturer in biology to students reading for honours chemistry. Dr Topping served on the council of the British Mycological Society (1952-4) and was for some years a member of the Field Studies Council. *News Bull. BMS* 22: 12-13, 1964.

TRAIL (James William Helenus; 1851-1919), botanist, mycologist, was born at Birsay, Orkney, and his father, a parish minister, became professor of Systematic Theology at Aberdeen. Trail went to school in Aberdeen and graduated from Aberdeen University in 1870 in arts with honours in natural science. In 1873 he was botanist to an expedition to Brazil and was in 1876 appointed Government Botanist in British Guiana but before he sailed, **G. Dickie**, the professor of botany at Aberdeen, resigned and Trail, at the age of 26, was appointed in his place and held the post until 1919. Trail's interests were wide but mycology was one of his main specialities. He played an active part in the Scottish Cryptogamic Society and in 1882 became editor of the *Scottish Naturalist*. He made many contributions to Scottish mycology and published revisions of the downy mildews, discomycetes, rusts, smuts, and coelomycetes (see Ainsworth & Waterhouse (1989): 34). He was also an authority on galls. He was president of the British Mycological Society (1902), and the Botany Section of the British Association (1910), and elected FRS (1893). *TBMS* 6: 297-8, 1920; *Kew Bull.* 1919: 379-88, *bibl.*; *James William Helenus Trail. A Memorial Volume*, 1923; *SC* 6: 428; D: 616 (BB: 303).

TRAVIS (William Gladstone; 1877-1958), of Liverpool, was employed by a firm of patent agents. His special interest was lichens and alone (or with **J. A. Wheldon**)

he published lists of lichens for Lancashire and other localities. *Hawksworth & Seaward* (1977): 28, 159-60 (*bibl.*); *SC* 6: 454; *D*: 617.

TREVISA (John de; 1326-1412), English scholar and cleric (*DNB* 2: 2111), was the first to use 'tinea' in English. (In his translation of Bartholomew de Glanville (= Bartholomaeus Anglicus (fl. 1230-1250); *DNB* 1: 788), *De Proprietatibus Rerum*, 1398 (printed by Wynkyn de Worde, 1495), fide *The Oxford English Dictionary*. *DNB* 2: 2111.

TRIMMER (Rev. Kirby; 1804-87) was vicar of St George Tombland, Norwich. He published *Flora of Norfolk*, 1886, which does not include fungi but the Norwich Central Public Library has a manuscript 'List of Norfolk Fungi' which he compiled and to which **C. B. Plowright** had access. *G. J. Cooke* (1935): 202; *D*: 619 (*BB*: 305).

TRYON (Henry; 1856-1943), was born at Buckfastleigh, Devon, and after study at the London Hospital farmed in New Zealand. He subsequently became Curator at the Queensland Museum (and published *Report on Insect and Fungus Pests*, 1887, for the Queensland Department of Agriculture) and, eventually, entomologist and vegetable pathologist to the Australian Department of Agriculture (1901-29). *Butler* (1929): 4; *D*: 620.

TROW (Albert Howard; 1863-1939), DSc (Lond.), FLS (1890), LLD, botanist and mycologist, studied at University College of Wales, Aberystwyth, and Freiburg University. He became professor of botany, and subsequently principal, at University College of South Wales & Monmouth, Cardiff. The results of his investigations on the biology and cytology of fungi (especially *Pythium* and *Saprolegnia*) were published in the *Annals of Botany* (9, 13, 15, 18, 1895-1904). *Proc. LS* 1939-40: 381-2; *WWW* (1929-40): 1366; *D*: 619.

TURNER (Dawson; 1775-1858), botanist (cryptogamist) and antiquary, was a banker of Great Yarmouth. He wrote (with **L. W. Dillwyn**) *The Botanist's Guide Through England and Wales*, 1805 (which includes lichen records for a number of counties) and (with **W. Borrer**) *Specimen of a Lichenographia Britannica*, 1839. He also supplied lichen records for J. M. Druery, *Historical and Topographical Notices of Great Yarmouth*, 1826. See **R. Richardson**. *DNB* 2: 2121; *Hawksworth & Seaward* (1977): 10-12, *port.*, 13, 160; *SC* 6: 544; *D*: 622 (*BB*: 306).

TULL (Jethro; 1674-1741) was born and buried at Basilon, Berks. He qualified for the bar but never practised, made the 'grand tour', and after marriage took up farming. Tull is remembered for his *Horse Hoing Husbandry, or an Essay on the Principles of Tillage and Vegetation*, 1733 (and later editions) which aroused controversy. In a chapter 'Of smuttiness' he described his experiments on wheat bunt (*Tilletia tritici*) from which he concluded that the cause was too much water. He advocated 'brining' of the seed as a control measure. *DNB* 2: 2119; *D*: 621.

TURNER (James; 1786-1820), of Yarmouth, brother of **Dawson Turner**, was reported to have been a keen lichenologist (*Hawksworth & Seaward* (1977): 12). *D*: 623 (*BB*: 307).

TURNER (Rev. William; c. 1508-1568), dean of Wells, physician and botanist, in his *New Herball (Thirde Parte, p.56)* published the first printed record of a British lichen (lungwort, *Lobaria pulmonaria*). *DNB 2: 2124; Hawksworth & Seaward (1977): 1-2; D: 624 (BB: 307)*.

TYNDALL (John; 1820-93), physicist, microbiologist, and popularizer of science, was Irish by birth and began his career in the Irish Ordinance Survey. He studied in Germany at the University of Marburg and became professor in natural philosophy at the Royal Institution and later succeeded Michael Faraday as adviser to Trinity House and the Board of Trade (1867-85). In addition to his researches in physics Tyndall had a long term interest in biogenesis and spontaneous generation and summarized the results of his investigations in this field in *Essays on the Floating Matter of the Air in Relation to Putrifaction and Infection*, 1881, which is a classic in its field. He also introduced sterilization by 'discontinuous heating' (Tyndallization). See also **T. H. Huxley, W. Roberts, J. Lister**. *DNB 2: 2129; DSB 13: 521-4; A. S. Eve & C. H. Creasey, Life and Work of John Tyndall, 1945*.

V

VARENNE (Ezekiel George; 1811-87), surgeon (MRCS, 1833) of Kelvedon, Essex, made a collection of Essex lichens which were examined and reported on by **E. D. Marquand**. *D: 627 (BB: 309)*.

VICE (Rev. John Edward; 1831-1916) was born in London and graduated BA from Trinity College Dublin; later becoming MA (Oxon., 1863). After ordination (deacon, 1859; priest, 1860) he was in turn curate at Bray, Co. Wicklow, Trowbridge, Wilts, St Saviour's Bath, St Mary's Hulme, Manchester, and, in 1869, Fordon, Welshpool, Montgomeryshire where in 1873 he became Vicar and remained until his retirement in 1910. Vize was a member of the Woolhope Club and a Foundation member of the British Mycological Society. He made many first mycological records for Montgomeryshire and the neighbouring Shropshire and issued three sets of fungi exsiccati: *Fungi Britannici*, 1873-5, *Micro-fungi Britannici*, 1875-88, *Micro-fungi Exotici*, 1883. He died at Bristol and his mycological specimens are at the Royal Botanic Gardens, Kew. *D: 631 (BB: 311)*.

W

WADDELL (Rev. Coslett Herbert; 1858-1919), MA, BD (Dublin, Trinity College), became rector of Saintfield and Grey Abbey, Co. Down, and published a list of the hymenomycetes of the Kendal district (*Westmorl. Note Book & Nat. Hist.* 19-24, 1886). *SC 7: 3; D: 632*.

WADE (Arthur Edward; 1895-1989), lichenologist and botanist, was born in Leicester and after being wounded in the First World War in 1920 joined the staff of the National Museum of Wales, Cardiff, where he worked in the botany department until his retirement in 1961. As a botanist he built up the National Welsh Herbarium and his botanical activities resulted in *Welsh Flowering Plants* (1934) and *Welsh Ferns* (1940) (both with **H. A. Hyde**); *Flora of Monmouthshire* (1970) and the posthumous *Flora of Glamorgan* (1990). Introduced to lichens by **A. R. Horwood** in Leicester he was virtually the originator of the Museum's collection of lichens; conducted courses on lichens at Malham Tarn Field Centre and subsequently at Dale Fort and Preston Montford Field Centres which were influential in introducing lichens to a number of the currently leading British lichenologists; and corresponded with **F. A. Sowter** and **W. Watson**. Among his many lichenological publication (see Hawksworth & Seaward (1977): 162-3, for a list) his monograph of the genus *Caloplaca* (*Lichenologist* **3**: 1-28, 1965) was important. Wade was a founding member, first secretary (1958-63), and then president (1964) of the British Lichen Society and the genus *Wadeana* Coppins & P. James (1978) was named in his honour. In 1981, to live with his daughter, he emigrated to New Zealand where he died. *Wade*, *Brit. Lichen. Soc. Bull.* **51**: 15-17, 1982; *ibid.* **65**: 9-10, 1990; *Watsonia* **18**: 113-4, 1990; *SC* **7**: 3; *Lichenologist* **21**: 379-81, 1989; **8**(1), 1976, *port.*

WADE (Walter; d. 1825) MD, FRS, Dublin physician and botanist. 'Professor and Lecturer in Botany to the ... Dublin Society'. Helped to establish the Dublin Botanic Garden. His *Plantae Rariores in Hibernia Inventae*, 1804 [reprinted from *Trans. Dublin Soc.*, 1803] lists, with comments, lichens and 55 fungi. *DNB* **2**: 2166; *Hassell* (1957): 118; *Muskett* (1976): 397; *SC* **7**: 4; *D*: 632 (*BB*: 312).

WAGER (Harold William Tayler; 1862-1929), FRS (1904), Hon. DSc (Leeds, 1914), became H. M. Inspector of Schools (1894-1926) after an appointment as demonstrator in botany (1888-94) at the Yorkshire College (from 1904 Leeds University) under Professor L. C. Miall (whose daughter he married). He was noted for his cytological studies on *Peronospora parasitica* and other fungi.

Wager was an active member of the Yorkshire Naturalists' Union (president for 1913 and the next year he succeeded **G. Masee** as chairman of the Mycological Committee and held this office until his death), twice president of the British Mycological Society (1910, 1919), and president of Section K (Botany) of the British Association for the meeting in South Africa in 1905. He was also a member of the Managing Committee of the Imperial Bureau of Mycology (see **E. J. Butler**). See also **W. W. Fowler**. *Nature* **124**: 953-4, 1929; *Proc. RS B* 1930: *xix-xxii*, *port.*, *Blackwell* (1961): 62-3; *WWW* (1929-40): 1396; *D*: 632.

WAKEFIELD (Elsie Maud; 1886-1972) was one of the most influential British mycologists of her generation. Born in Birmingham Miss Wakefield was introduced to nature study by her father H.H. Wakefield, schoolmaster, naturalist, and author of an elementary botanical textbook. After schooling in Swansea she

entered Somerville College, Oxford, where she gained a first-class honours degree in botany and in her fourth year studied forest pathology, an interest which took her, aided by a Gilchrist Fellowship, to work under Karl von Tubeuf in Munich where her studies on *Schizophyllum* (published 1909) were germinal for

Figure 22. Elsie Maud Wakefield (1886-1972)

the later discovery of heterothallism in hymenomycetes.

Returning to England she was appointed, in 1910, assistant to **George Massee** to whose post at the Royal Botanic Gardens, Kew, she succeeded in the following year and held until her retirement in 1951. She was the first graduate mycologist to be appointed at Kew and a pioneer woman in the Scientific Civil Service. Unlike her successors at Kew, Miss Wakefield travelled little but in 1920, as holder of the Somerville College Mary Ewart travelling scholarship, she spent six months in the West Indies which gave her a lasting interest in tropical fungi. With **A. D. Cotton** she revised the British Clavarias (1919) but her main life-long research interest was in resupinate basidiomycetes which were the subject of her last paper published in her eighty-third year. Her knowledge of the larger British basidiomycetes was encyclopedic and her interest in these forms was aided by her skill as a watercolourist as evidenced by the plates in the later editions of the Ministry of Agriculture's Bulletin on edible and poisonous fungi and *Common British Fungi*, 1950, written in collaboration with R. W. G. Dennis. She was Secretary of the British Mycological Society for 17 years and President of the Society for 1929. See also **A. Sharples**. *TBMS* **60**: 167-74, *port.*, *bibl.*,

1973; **49**: 355, port., 1966 (80th birthday); *Mycologist* **2**: 33, port., 1988; *SC* **7**: 24; *D*: 633.

WAKELY (C. T. N.; 1902-58) graduated at Reading (1924) and did post graduate work at the Imperial College under **W. Brown**. After serving as assistant inspector of horticulture (Ministry of Agriculture & Fisheries) in 1925 took charge of the Agriculture Department of Bayer Products Ltd and in 1951 became managing director of Bayer Agriculture Ltd. *Ann. Appl. Biol.* **47**: 380, 1959.

WALDIE (John Scott Laidlaw; 1901-66), forest pathologist, graduated from Edinburgh University and published with **M. Wilson** on rusts (*TBMS* **12**) and diseases of trees (**13**). From 1927 lectured in crop botany in the Department of Agricultural Botany, University of Reading, where he was warden of Wantage Hall (a student hostel) for nearly thirty years. *Bull. BMS* **2** (1): 8, 1968.

WALKDEN (Harold; 1885-1949), FLS (1939), studied at Manchester University under Professor **F. E. Weiss** but ill health prevented him achieving a degree. He investigated crown gall in chrysanthemum under Professor W. H. Lang (see *Ann. Bot.* **35**, 1921; **37**, 1923) and made gifts to the University. *Proc. LS* 1949-50: 233-4; *D*: 634.

WALLACE (Edwin Race; 1908-84), plant pathologist, was born at Ilkley, Yorks., and graduated from Cambridge (Emmanuel College), BA (1929), Dip. Agric. Sci. (1930). From 1930-46 he was mycologist at the Agricultural Institute, Kirton, Lincs., then (1946-52) assistant plant pathologist in the National Agricultural Advisory Service at Lincoln, and subsequently served in the East Midlands Province (Shardlow), the Eastern Province (Cambridge), and the Northern (Newcastle-on-Tyne) before retirement. Wallace regularly attended forays of the British Mycological Society and he had a deep and erudite interest in words and terminology and served on the Terminology Sub-Committee of the Federation of British Plant Pathologists.

WALLIS (Rev. John; 1714-93), county historian, curate of Simonburn, published a county list of lichens in his *Natural History and Antiquities of Northumberland*, 1769. *DNB* **2**: 2182; *Gilbert* (1980); 331; *SC* **7**: 42; *D*: 637 (*BB*: 315).

WARD (Harry Marshall; 1854-1906), BA (Cantab., 1879), DSc (1892), FLS (1856), FRS (1888), was born at Hereford. His schooling (at Lincoln and Nottingham) finished at the age of 14 but he attended evening classes organized by the Science and Art Department and was, in 1874-5, admitted to a course for teachers in training by T. H. Huxley. In the summer of 1875 he studied botany under W. Thiselton-Dyer and H.S. Vines in the Science Schools at South Kensington and then spent a session at Owen's College, Manchester. After acting as assistant to Thiselton-Dyer he won a scholarship to Christ's College, Cambridge, where he gained a first class in the Natural Science Tripos in 1879. He then spent a short time in Germany (under Julius Sachs at Würzburg) and at the end of 1879, on the recommendation of Kew, was appointed for two years as Government Cryptogamist in Ceylon [Sri Lanka] to study coffee rust (*Hemileia vastatrix*). His investigations on coffee rust in Ceylon are classical and set a standard for

subsequent tropical plant pathology. He also published on other subjects including *Meliola*, and *Mycoidea parasitica*. On returning home, he visited A. de Bary at Strasburg, was awarded a research fellowship at Owen's College, Manchester, where he became assistant to Professor W. C. Williamson in 1883. In 1885 he became the first professor of botany at the Royal Indian Engineering College, Coopers Hill, Surrey; an appointment he held for ten years (1885-95). Marshall Ward's investigations at Coopers Hill were diverse. His work on root tubercles of leguminous plants led him to take a deep interest in bacteriology, his famous paper in the *Annals of Botany* for 1888 on lily disease was germinal for **W. Brown's** subsequent researches at the Imperial College on the physiology of parasitism and, particularly, *Botrytis* enzymes. He was also interested in symbiosis and with Percy Frankland, at the request of the Royal Society (to which Marshall Ward was elected a Fellow in 1888), undertook a major study of the bacteriology of water, Thames water in particular. At this time Marshall Ward also published a number of books including *Timber and Some of its Diseases* and the little *Diseases of Plants*, in 1894, and *The Oak: a Popular Introduction to Forest Botany*, 1892. In 1895 Marshall Ward succeeded C. Balfour as professor of botany at Cambridge where he was largely responsible for the new building for the botany department. In 1901 *Disease in Plants* was published and it was about that time that he became interested in brown rust of brome grasses and obtained evidence discounting the 'mycoplasma' hypothesis. Marshall Ward was, in the words of Thiselton-Dyer 'singularly dexterous in manipulation', 'a refined and accomplished draughtsman', 'rigorous in demanding exhaustive proof', and 'In later years, in conversation especially, thought seemed to come quicker than words to express it ... he would ... remain silent, and slowly move his head' gaining 'the reputation of being "mysterious"'. He died in Torquay and was buried in Cambridge. See also **B. T. B. Barker, H. H. Biffen, F. T. Brooks, D. Moore, D. Morris, I. B. Pole-Evans, G. H. K. Thwaites**. *DNB 2: 2948; Proc. RS B83: i-xiv, 1911; Oliver (1913): 261-79; port.; SC 7: 65; D: 639 (BB: 315)*.

WARDLAW (Claude Wilson; 1901-85), Professor of Cryptogamic Botany (1940-58) and then Professor of Botany (1958-66) at Manchester University graduated in botany from Glasgow in 1922. After teaching botany at Glasgow and a period at the Imperial College of Science he undertook research on the Lanarkshire disease of strawberry before his appointment in 1928 as pathologist for banana research at the Imperial College of Tropical Agriculture, Trinidad, at a time when Panama disease was epidemic in the West Indies. As a result he wrote the standard text; *Diseases of the Banana*, 1935 (revised and extended as *Banana Diseases*, 1961; (1972). In 1937 he became officer-in-charge of the Low Temperature Research Station in Trinidad and this led to *Tropical Fruits and Vegetables, Storage and Transport*, 1937. At Manchester his interests were mainly in morphology and morphogenesis. *Times 18 Dec. 1985*.

WARE (William Melville; 1892-1955), plant pathologist, in 1911 became a student at Wye College, Kent, where he gained a BSc (Agric.) and, after Army service

during the First World War, returned there as a lecturer in botany. In 1923 he joined the Mycology Department (Research and Advisory) of the College, under Professor **E. S. Salmon**, where he remained until his retirement in 1946, having succeeded Salmon as head of the Department in 1937.

Ware undertook research on a variety of plant pathological topics (for which he was awarded the MSc (1923) and DSc (1935)) including clover diseases, apple scab, downy mildew of hop, and especially, diseases of mushrooms. In 19 he wrote a Bulletin on mushroom-growing for the Ministry of Agriculture. He disliked committee work but did serve terms on the Council of the Association of Applied Biologists and the Plant Pathology Committee of the British Mycological Society, and after retirement, from 1948, was assistant editor of the *Journal of Horticultural Science*. *Nature* **175**: 494, 1955; *J. Hort Sci.* **30**: 149-50, 1955; *D*: 640.

WATERSTON (Anthony Peter; 192 -83), MD, FRCP, FRC(Path.), medical virologist and historian of viruses, was from 1964 professor of virology at the Royal Postgraduate Medical School, London. He was the author, with Lise Wilkinson, of *An Introduction to the History of Virology*, 1978 (Cambridge), chap. 10 of which deals with plant and insect viruses (see L. Wilkinson, *Med. Hist.* **20**: 111-34, 1976; also Lily E. Kay, *Isis* **77**: 450-72, 1986 (Stanley's crystallization of tobacco mosaic virus)). *Times* 4 Nov. 1983; *Lancet* **2**: 1039, port., 1983.

WATSON (Walter; 1872-1960), schoolmaster, bryologist, was a lichenologist of international repute. He was a Yorkshireman by birth and after graduating from the Royal College of Science taught successively at Larn Grammar School (1901-2), Poulton-le-Fylde Grammar School (1901), Sexey's School, Bruton (1903-7), where he was botany master, and finally Taunton School (1908-34), where he became senior science master. Always a keen cricketer, at the time of his death in Taunton he was the oldest member of the Somerset County Cricket Club. He was the author of *Readable School Botany* and *Elementary Botany* and his many scientific papers included important contributions to a knowledge of lichens. Among these were: a field key to lichens (*J. Bot.*, **60**, Suppl. 28, 1922), a review of lichen classification (*New Phytologist Reprint*, No 18, 1929) a list of British fungi parasitic on lichens (*TBMS* **31**: 305-39, 1948), and a monograph of *Usnea* in Great Britain and Ireland. He finally summarized the literature on the occurrence of lichens in the British Isles in *Census Catalogue of British Lichens*, 1953 (British Mycological Society). He also made many additions to local lists of lichens.

He gave his lichen herbarium to the Royal Botanic Gardens, Kew, and the remainder of his collections to the County Museum, Taunton. See also **A. E. Wade**. *Lichenologist*: 207-8, 1960; *TBMS* **43**: 581-2, port., 1961; *Seaward* (1987): 46-7; *SC* **7**: 105; *D*: 644.

WATSON (Sir William; 1715-87), MD (Halle and Wittenberg, 1757), LRCP (1759), FRCP (1784), FRS (1741), knighted, 1786, was a physician to the Foundling Hospital London, and also an expert naturalist and student of electricity. He is

remembered mycologically for his paper on *Geaster* (*Phil. Trans.* **43**: 234, 1744) and he also published on mushroom culture (*ibid.* **42**). 'Watson did much to introduce the Linnean system into England' (fide the *DNB*). *DNB* **2**: 2211; *DSB* **14**: 193, 1976; *SC* **7**: 106; *D*: 645 (*BB*: 318).

WATT (Sir George; 1851-1930), MB (Glasgow), FLS (1874), was born at Old Meldrum, Aberdeenshire, and became professor of botany at Calcutta in 1872. He held several other posts in India before retiring to Scotland and is particularly noted for his *Dictionary of the Economic Products of India*, 9 vol., 1889-96. He collaborated with **H. H. Mann** (q.v.). *WWW* (1929-40): 1243-4; *Nature* **125**: 677-8, 1930; *SC* **7**: 108; *D*: 645.

WATTAM (William Edward Locking; 1872-1953), lichenologist, was a solicitor's clerk and amateur naturalist who was secretary of the Yorkshire Naturalists' Union, 1911-20. He published papers on lichens in the *Naturalist*, 1911-53 (see Hawksworth & Seaward (1977): 167-8). *Naturalist* 1953: 141-2, *port.*; *Seaward* (1987): 46; *D*: 646.

WAUGH (Richard; d. 1806) was a Northumbrian naturalist in the flour trade who supplied records of local lichens to **N. J. Winch. Gilbert** (1980): 333; *D*: 647 (*BB*: 319).

WEDDELL (Hugh Algernon; 1819-77), MD (Paris, 1841), FLS (1859), botanist, was born at Painswick, Glos., and died at Poitiers, France. His lichen specimens are at the Natural History Museum (**BM**). *SC* **7**: 137; *D*: 649 (*BB*: 320).

WEISS (Frederick Ernest; 1865-1953), BSc (1888), FLS (1888), FRS (1917), was professor of botany at Manchester University, 1892-1930 and president of the Linnean Society, 1931-34. He described a mycorrhiza from the Lower Coal Measures (*Ann. Bot.* **18**: 255-65, 1904). See also **J. Ramsbottom**, **H. Walkden**. *Nature* **171**: 285-6, 1953; *WWW* (1951-60): 1149-50; *SC* **7**: 166; *D*: 650.

WEST (William; 1848-1914), FLS (1887), of Bradford, Yorks., was a pharmacist and lecturer in botany at Bradford Technical College. Some of his collections of Yorkshire lichens are at the Royal Botanic Gardens, Edinburgh. He was the father of George Stephen West (1876-1919), the algologist, who became professor of botany at Birmingham University. *Seaward* (1987) 45; *SC* **7**: 204; *D*: 651 (*BB*: 321).

WESTERN (John Henry; 1907-81), after some agricultural experience, entered University College, Aberystwyth, from which he graduated with first-class honours. After a year at Minnesota and two more at Aberystwyth he undertook teaching and advisory work at Manchester and when the National Agricultural Advisory Service was organized in 1946 he became Regional Plant Pathologist for the Northern Region. In 1951 he was appointed senior lecturer in agricultural botany at Leeds University where from 1960-71 he held the first chair of agricultural botany in the Department of Agricultural Botany. Western's most notable publications were in collaboration with **K. Sampson**. He president of the Association of Applied Biologists for 1961. *Bull. BMS* **16**: 80, 1982.

WHARTON (Henry Thornton; 1846-95), a medical man, classical scholar (he translated

Sappho), and amateur mycologist, who was educated at Charterhouse and graduated from Oxford (Wadham College), is remembered for his paper on the use of Latin colour names by E. M. Fries (*Grevillea* **13**: 25-31, 1884 (reprinted *Trans. Woolhope Nat. Field Club* 1883-5: 252-7, 1890, and, condensed, by W. T. Stearn, *Botanical Latin*, 1966: 253-8)) which has been much consulted. See also **J. M. Du Port**. *DNB* **2**: 2241 (under E. R. Wharton (1844-96), his brother); *D*: 652.

WHEELER (Edwin; 1833-1909), was a homeopathic druggist of Bristol. A collection of his (and R. Baker's) watercolour drawings of fungi of the Bristol district (1889-99) were sold at Sotheby's 2 June 1971. Other Wheeler drawings of fungi of Somerset are at Kew (boxes 168, 169). *SC* **7**: 241; *D*: 653.

WHELDON (H. J.) was the author of 'Fungi of the sand-dune formation of the Lancashire coast' (*Lanc. Ches. Nat.* **7**, 1914 (6 parts) and also 'The fungus flora of Lancashire and Cheshire' *ibid.* **11**, 1918-19 (4 parts) also published on the fungi of Argyll and Perthshire, *Scot.Nat.* **77**: 34-8. 1911.

WHELDON (James Alfred; 1861-1924), naturalist, was pharmacist to H. M. Prison, Walton, Liverpool (1891-1922), published papers on lichens (see Hawksworth & Seaward (1977): 169-70 (bibl.). *Hawksworth & Seaward* (1977): 28 (port.), 89, 169-70 (biol.); *SC* **7**: 24.D: 653.

WHITE (Charles Frederick; 1818-96), FLS (1876) was a founder of the Ealing Microscopical and Natural History Club. His drawings of microfungi are at Kew. He married Eliza C. (née Quekett) (see **E. C. White**). *Proc. LS* 1896-7: 72; *D*: 654 (*BB*: 323).

WHITE (Eliza Catherine (née Quekett); 1812-75), born at Langport, Somerset, the sister of **E. J.** and **J. T. Quekett**, married **C. F. White**. She was a keen collector of microfungi and lived in Limehouse, then Bow, London. *Proc. LS* 1896-7; *D*: 654 (*BB*: 324).

WHITE (Francis Buchanan White; 1842-94) was a leading Perth doctor and an able naturalist. He helped to found the Perthshire Society of Natural Sciences and edited its journal, the *Scottish Naturalist*, 1871-91. He also compiled a list of Perthshire fungi (see *Scot. Nat.* **5**: 173, 270, 362; **6**: 39, 1879-81). See also **J. Fergusson**. *Ramsbottom* (1963): 172; *SC* **7**: 250; *D*: 654 (*BB*: 324).

WHITE (Rev. Gilbert; 1720-93), BA (Oxon., 1744; Oriel College), MA (1746), ordained 1747, was born, lived most of his life, and died at Selbourne, Hants, and is renowned as the author of *The Natural History and Antiquities of Selbourne*, 1789, quarto, of which there have been *ca* 300 later issues. In his *Naturalist's Journal* (on which the *Natural History* is based and of which extracts were edited by W. Johnson in 1931). Gilbert White made a number of references to the occurrence of truffles and in 1750 he speculated on the fairy-rings associated with puff balls that occurred in his garden turf which originated from the Downs (see Ramsbottom (1953): 120,168-9). *DNB* **2**: 2249-50; *DSB* **14**: 290-300; *SC* **7**: 251; *D*: 654 (*BB*: 324).

WHITEHEAD (Tatham; 1889-1964), plant pathologist, was born at Padiham, nr

Burnley, Lancs., and after attending evening classes at Burnley won an open scholarship to the Royal College of Science, London. After a post at Armstrong College, Newcastle-upon-Tyne (1915-20) he became advisory mycologist at University College of North Wales, Bangor (1920-46) and then, until his retirement in 1955, senior plant pathologist for Wales at the National Agricultural Advisory Service sub-centre at Bangor. He is noted for his work on the potato, particularly virus diseases, and with T. C. McIntosh and W. M. Findlay wrote *The Potato in Health and Disease*, (edn 3, 1953). His life long interests were botany and Christianity. *News Bull. BMS* 23: 31, 1965; *D*: 656.

WHITFIELD (Arthur; 1868-1947), professor of dermatology at King's College, London, was the originator of Whitfield's ointment (a benzoic acid-salicylic acid mixture for use against ringworm) and the author of *A Handbook of Skin Diseases and Their Treatment*, (edn 2, 1921) and papers on dermatophytes. *BMJ* 1947 2: 274-5, *port.*; *Lancet* 1947 1: 311, *port.*; *Brit. J. Derm.* 59: 173-6, *port.*, 1947.

WHITTLE (Claude Howard; 1896-1986). After graduating at Cambridge (Queen's College) Whittle gained clinical experience at King's College Hospital, London, where he acted as **A. Whitfield's** house physician (and where he may well have had his interest in pathogenic fungi aroused), returning to Cambridge in 1923. There he was associated with Addenbrooke's Hospital for the rest of his working life, first as clinical pathologist, then as physician in charge of the Skin Department. During the First World War he served in the Friends' Ambulance Unit. Whittle published on dermatophytes, had an interest in *Candida*, and was president of the British Society for Mycopathology for 1973-6. His hobbies included sailing, choral singing, and house repairs. *BMJ* 292: 1086, 1986; *Lancet* 1986 1: 1107.

WILKINS (William Henry; 1886-1966), an East Anglian by birth, was trained as an artist and worked in London and Paris until 1918 when, at the age of 32, he entered Oxford University (Keble College) to read botany, gaining first class honours in 1921. He was University Demonstrator (1924-47), then reader in botany. An original Fellow of St Peter's College, which he had joined in 1931 as lecturer responsible for tuition in Natural Science, the College finally made him a Senior Research Fellow (1951-58). 'He was', in the words of *The Times* obituary, 'very much a "college man"'. Mycology attracted him and from about 1931 for a number of successive years he took a party of his students to Haslemere each autumn to collect larger fungi - expeditions which resulted in a series of papers on the ecology of larger fungi (*Ann. Appl. Biol.* 24-26, 1937-39). During the Second World War Wilkins and **E. W. Swanton** of the Haslemere Museum collected specimens of several hundred species of agarics the juice from which was tested for antibiotic properties. **F. B. Hora** was one of his students. *Times* 26, 27 Apr. 1966.

WILKINSON (William Henry; d. 1918), of Sutton Coldfield, Warwickshire, contributed lichens of Hampshire and the Isle of Wight to the *Victoria History of the Counties of England*, 1900. *D*: 661.

- WILLIAMS** (David Aelwyn; 1907-86), LRCP (1930), MRCS (1930), MD (1939), qualified in medicine at the Welsh School of Medicine and was appointed to St David's Hospital, Cardiff. Dr Williams was an asthmatic and specialized in asthma and its treatment. He established the first asthma clinic in Wales in 1935 and was head of the Asthma & Allergy Research Unit at St David's Hospital. He played a major role in founding the Asthma Research Council, was a founder member of the British Association of Clinical Allergy, a fellow of the American Academy of Allergy, and served as secretary of the International Academy of Allergy. For many years he collaborated with **H. A. Hyde** (see *New Phytol.* **44**: 83-94, 1945) on the pollen and fungus spore content of the atmosphere. He was the first clinician in the United Kingdom to use adrenocorticotrophic hormone. *BMJ* **293**: 60-61, *port.*, 1986.
- WILLIAMS** (Phillip H.; 1901-68), plant pathologist, was born in Plymouth (son of Dr T. M. Williams of Yelverton) and graduated from University College, London, in 1922. Research assistant at Cheshunt Research Station for CO₂ investigations (1923-4) he was then appointed mycologist at Cheshunt, a post he held until his retirement in 1961. Williams reported most of the results of his investigations and advisory work in the Station's Annual Reports. He died in 1968 from a brain tumour.
- WILLIAMSON** (Helen Stuart (née Chambers); 1884-1934), cytologist, collaborated and published with **H. C. I. Gwynne-Vaughan** (née Fraser) both before and after their marriages. *Nature* **134**: 998, 1934; *D*: 663.
- WILSON** (Albert; 1862-1949), a Lancashire man by birth, was a pharmaceutical chemist at Bradford, Yorks., but retained an interest in the natural history of Lancashire for which (and other localities) he published lists of lichens either alone or with **J. W. Wheldon**. *Hawksworth & Seaward* (1977): 28,171-2 (*bibl.*); *SC* **7**: 349; *D*: 665.
- WILLISEL** (Thomas; d. *ca* 1675), naturalist, who collected botanical and zoological specimens for the Royal Society in England and Scotland; also for **C. Merrett**, **R. Morison**, **J. Ray**, and **W. Sherard**. In 1674 became gardener to John Vaughan, 3rd Earl of Carbery, in Jamaica where he died. See also **A. Buddle**. *DNB* **2**: 2287; *D*: 664 (*BB*: 329).
- WILSON** (Aphra; 1895-1976) had her training at the Imperial College of Science, from where she graduated in 1921, interrupted by the 1914-18 war during which she was a dispatch-rider and was awarded the MBE. Specializing in pests and diseases of plants she was a member of the Swanley Horticultural College staff for eight years (1922-30), when, after a period at the Imperial College under Professor **W. Brown** working on the application of colloidal fungicides, she joined the Boots Company in 1936 (and later became one of the first women directors). She did much towards the establishment of the Lenton Research Station at Lenton House, and travelled widely on missions for her company. *Times* 17 Jan. 1976.
- WILSON** (Sir Graham Selby; d. 1987), DSc, FRS (1978), knighted, 1962, bacteriologist, served in the Royal Army Medical Corps, 1916-20. His two main

appointments were: professor of bacteriology in relation to hygiene at the London School of Hygiene & Tropical Medicine, 1930-47, and director of the newly constituted Public Health Laboratory Service, 1941-63. He was the author, with W. W. C. Topley of the *Principles of Bacteriology and Immunology*, 1929 (edn 6, with A. A. Miles, 1975; edn 7 (also with M. T. Parke), 1984) which established itself as a standard textbook. *Biogr. RS* **34**: 887-919, *port., bibl.*, 1988; *Times* 6 April 1987; *WW* (1987): 1901.

WILSON (John Hardie; 1858-1920), DSc (1889) was lecturer in botany at St Andrew's University where he planned the first botanic garden. He produced a strain of disease resistant potato. *Nature* **104**: 539-40, 1920; *D*: 667.

WILSON (Malcolm; 1882-1960), BSc (Lond., 1905), DSc (Lond., 1911), FLS (1910), FRSE (1923), was appointed demonstrator in botany at the Imperial College, London, where he succeeded **R. J. Tabor**, and was subsequently lecturer, then reader in mycology at Edinburgh University (to 1951) and president of the BMS for 1935. He specialized in Uredinales and published (with **G. R. Bisby**) a check list of the British Uredinales (*TBMS* **37**: 61-68, 1954) and (with D. M. Henderson) *British Rust Fungi*, 1966. *Ann. Appl. Biol.* **49**: 386, 1961; *SC* **7**: 354; *D*: 668.

WILSON (R.; fl. 1800s), of Medomsley, Durham, sent drawings of fungi to **N. J. Winch**. *D*: 668.

WILTSHIRE (Samuel Paul; 1891-1967) spent the greater part of his working life at the Commonwealth Mycological Institute, Kew. Appointed editorial assistant at the Imperial Bureau of Mycology (as it then was) in 1922 (and in the same year married Violet Gertrude, daughter of **D. H. Scott**) he subsequently became Sub-editor then Editor of the *Review of Applied Mycology* (in 1970 renamed *Review of Plant Pathology*), Assistant Director of the Institute and, from 1940 to his retirement in 1956, Director (in succession to **S. F. Ashby**) when he was largely responsible for the building, opened by HRH Prince Philip in 1955, which housed the library and herbarium. The main function of the Bureau and the Institute was to abstract the world literature on plant disease and to publish the results in the monthly *Review of Applied Mycology*. Wiltshire had the temperament to become a meticulous editor, and the increasing size of the literature and the increasing need for information led him to diversify the Institute's publications. He developed the regular publication *Distribution Maps of Plant Diseases*, supplemented the *Review of Applied Mycology* with a newsletter, and planned, but left his successor to implement, a series of descriptions of pathogenic fungi and bacteria. He also initiated a second abstracting journal, the quarterly *Review of Medical and Veterinary Mycology*, the *Index of Fungi* (listing new fungal names), and the *Bibliography of Systematic Mycology*, listing taxonomic publications by titles. Finally, *Mycological Papers* (a main outlet for mycological research carried out at the Institute) and *Phytopathological Papers* were results of his initiative. Due to **E. J. Butler's** interest in medicine, increasing attention was paid to publications on medical mycology in the *Review of Applied Mycology*. During the Second World War,

Wiltshire asked Lord Hankey's Committee (set up in 1942 to review the work of the Institute) 'how far the Institute should cover papers in relation to medicine'. As a result of consultation with the Medical Research Council, the *Review of Medical and Veterinary Mycology* was started and the MRC set up a Medical Mycology Committee (Chairman: **J. T. Duncan**; Secretary: **R. T. St John-Brooks**) representative of medical, veterinary, and mycological interests to advise the Council.

Wiltshire was born at Burnham-on-Sea, Somerset, studied at the Universities of Bristol and Cambridge (Emmanuel College) and the Royal College of Science, and during 1914-22 worked on apple and pear scab at the Long Ashton Research Station, a period broken by an interval of war service as a microbiologist under the Ministry of Munitions. He was well known as a mycologist and was president of the British Mycological Society, 1943. Although the author of so many novelties, Wiltshire was very conservative in editorial matters but this reluctance to make changes was basically a reluctance to jeopardize standards. Reserved and of a retiring disposition Wiltshire was seldom seen at scientific meetings and he travelled little. He was, however, a man of high principles and deeply religious. The funeral service was held at the Ebenezer Baptist Chapel, Kew, which he had attended for thirty-nine years and served as a deacon for more than twenty. *Times* 16 May 1967; *Nature* **215**: 221, 1967; *TBMS* **50**: 513-4, 1967; **27**: 1, port., 1944; *SC* **7**: 357; *D*: 669.

WINCH (Nathaniel John; 1768-1838), FLS (1803), botanist (lichenologist) and geologist of Newcastle-upon-Tyne was an iron-merchant and anchor smith. He was elected Sheriff in 1805 and from 1816 was secretary to the Newcastle Infirmary. His most important publication is his *Botanists' Guide Through the Counties of Northumberland and Durham*, in vol. **2** (edited by Winch and **J. Thornhill**), 1807, in which fungi and 260 lichens are listed. Subsequently he compiled 'The flora of Northumberland and Durham' (*Trans. Nat. Hist. Soc. Northumberl.* 1832: 1-150; Addenda *ibid.* 1836: 151-9) in which the lichens are increased to 300. He sent specimens of Northumberland lichens to **D. Turner & L. W. Dillwyn**. He bequeathed his herbarium (20,000 specimens) to the Linnean Society but most of the lichen specimens are now lost. See also **R. Waugh**. *DNB* **2**: 2298; *Gilbert* (1980): 331-4, port.; *SC* **7**: 362; *D*: 669 (*BB*: 331).

WINDSOR (John; 1787-1868), born at Settle, Yorks., was a Manchester surgeon who included an account of lichens in his *Flora Cravoniensis* published posthumously in 1873. His herbarium is at Manchester. *Seaward* (1987): 44; *SC* **7**: 364; *D*: 669 (*BB*: 331).

WITHERING (William; 1741-99), a successful Birmingham physician (MD Edinburgh, 1766), botanist, and member of the 'Lunar Society', was born at Wellington, Shropshire. He is remembered in medical history for his correct use of digitalis and his monograph *An Account of the Foxglove and Some of its Medical Uses*, 1785. His other famous publication is that variously titled and usually cited as *A Systematic Arrangement of British Plants*, 1776 and later

editions [edns 4 to 7 edited by his son **William Withering** (1775-1832) 2-4 vols depending on the edition]. Withering was the first to attribute fairy rings to fungi (*Systematic Arrangement*, edn 2, 3: 336-7 1785). See also **E. Robson**, **R. Stone**. *DNB* 2: 2307; *DSB* 14: 463-5; *SC* 7: 398; *D*: 670 (*BB*: 332).

WITHERING (William; 1775-1832) was the son of **William Withering**, 1741-99, q.v. *D*: 671 (*BB*: 332).

WOOD (Frederick Charles; b. 1910) graduated from Cambridge (Trinity College) and in 1933 was appointed bacteriologist and mycologist to W. Darlington & Sons, Worthing, mushroom growers.

WOODHAM-SMITH (Cecil Blanche (née Fitzgerald); 1896-1977), CBE (1960), biographer and historian, born at Tenby, Wales, was of Irish extraction. She was at Oxford University (St Hilda's College; of which she became an honorary fellow) and had a natural ability to write (being the author of several novels under the name 'Janet Gordon'. When her two children started at boarding school she wrote authoritative lives of *Florence Nightingale*, 1950, *Queen Victoria*, 1972, and also *The Great Hunger. Ireland 1845-9*, 1962, which is required reading for anyone interested in the social and economic effects of the Irish famine caused by potato blight. *DNB*(1971-80): 924-5; *Times* 17 March 1977, *port*.

WOODWARD (Robert Cecil; b. 1898), plant pathologist, graduated BSc. Agr. from Macdonald College, Canada, and during 1923-24 studied apple mildew under **F. T. Brooks** at Cambridge and gained a PhD. From 1925-32 he was university research officer in mycology at the School of Rural Economy, Oxford, and when the Advisory Centre closed remained at Oxford with an ARC grant to complete his apple mildew work. After serving as a Ministry of Agriculture's inspector he was appointed mycologist to Imperial Chemical Industries Ltd, working first at Millbank then Jealott's Hill, then Millbank again as head of overseas development; returning to Jealott's Hill in 1959 where he remained Academic Liaison Officer until his retirement in 1960.

WOODWARD (Thomas Jenkinson; 1745-1820), Norfolk botanist, published the first record of *Battarea phalloides* (as *Lycoperdon phalloides*) based on a find near Bungay, Suffolk by **W. Humphrey** (*Phil. Trans.* 74: 423, 1784). Persoon *in litt.* had first suggested *Bungea* for *Battarea* (see J. Ramsbottom, *Proc. LS* 146 (Part 1) 1933-4). *DNB* 2: 2321; *G. J. Cooke* (1935): 194; *SC* 7: 449; *D*: 676 (*BB*: 335).

WORMALD (Harry; 1879-1955), plant pathologist and mycologist, was trained as a school teacher and during 1900-08 taught in Yorkshire schools. He then entered the Royal College of Science, Imperial College, with a Board of Education Scholarship and graduated in 1911. A Marshall Scholarship enabled him to start research at the Imperial College for which he was awarded the College Diploma before becoming assistant to Professor **E. S. Salmon** at Wye College where he began his studies on brown rot diseases of fruit trees. In 1923 when the East Malling Research Station was established Wormald was appointed head of the plant pathology section where he remained until he retired in 1939 but continued his researches there until 1945. He was Assistant Director of the Station 1936-45.

Wormald undertook varied investigations on fungal and bacterial diseases of fruit trees. His most notable publications being: 'brown rot of fruit trees' (*Bull. Ministr. Agric.* **88**, 1935; revised as *Tech. Bull.* **3**, 1955) and *Diseases of Fruit and Hops*, 1939 (edn 2, 1955). Wormald served as president of the British Mycological Society (1940) and edited the *TBMS* (1931-40). He was a man of parts - an accomplished pianist, a keen cricketer, an expert photographer, and a linguist (he could translate from seven languages). *TBMS* **39**: 289-90, *port.*, 1956; *Rep. E. Malling Res. Stn* 1955: 15-16, *portr.* 1956; *D*: 677.

WORSDELL (Wilson Crosfield; 1863-1957), FLS (1898), was born in the United States and came to England in 1871. He worked at the Jodrell Laboratory, Kew, and was the author of *Principles of Plant Teratology*, 2 vol., 1915-16. Cf. **M. T. Masters**. *D*: 677.

WORTLEY (William Russell Stamp; b. 1912), plant pathologist, was educated at Haileybury College and graduated from Cambridge (Gonville & Caius College) in 1930. During 1934-37 he was plant pathologist under the Hills Bequest at the School of Agriculture, Cambridge, and this was followed by research under S. Dickinson at Cambridge on the effects of lithium salts on plant growth and diseases by which he gained a PhD in 1938. He followed R.W.G. Dennis as assistant at the Potato Virus Research Station, Cambridge, where from 1942-45 he was on half-time and half-time at the Imperial Bureau of Plant Genetics (serving full time at the latter, 1945-51). From 1951-55 he was a senior scientific officer at the Potato Genetics Station, Cambridge but refused to join the John Innes Institute when the potato collection was transferred there in 1955.

WRIGHT (Edward Percival; 1834-1910), MA (Dublin, 1857), MD (1862), FLS (1859), a member of the Dublin Microscopical Club, had zoological interests and was lecturer in zoology at Trinity College, Dublin for ten years before serving as professor of botany (1869-1904) when he paid particular attention to the Trinity College herbarium. He investigated the role of *Chytridium* spp. parasitic on desmids and filamentous algae (see Muskett(1976): 298, 431 (52), 432 (86)). Wright was president of the Natural History Society of Dublin (1872) and the Royal Society of Antiquarians (1900). See also **J. Barker**, **W. Frazer**, **Porte**. *DNB* **2**: 2974; *J. Bot.* 1911: 124, *port.*; *D*: 678 (*BB*: 336).

Geographical distribution of mycologists mentioned in the text

English counties

Bedfordshire

Abbot, G.
Hamson, J.
Higgins, D. M.
Saunders, J.
Smith, Worthington G.

Berkshire

Buddin, W.
Hora, F. B.
Percival, J.
Stoughton, R. H.
Tull, J.
Waldie, J. S. L.
Woodward, R. C.

Buckinghamshire

Bunting, R. H.
Cartwright, K. St G.
Findlay, W. P. K.
Henderson, F. Y.

Cambridgeshire

Arber, A.
Barrett, A. M.
Biffen, R. H.
Bradley, R.
Brenchley, G. H.
Brian, P. W.
Brooks, F. T.
Dickson, C. B.
Dillon-Weston, W. A. R.
Dowson, W. J.
Ellis, W. G. P.
Garrett, S. D.
Henslow, J. S.
Kidd, F.
Leach, R.
Lister, J. J.
Markham, R.
Martyn, J.
Metcalf, C. R.
Mudd, W.
Parker-Rhodes, A. F.
Relham, R.
Ripper, W. E.

Rishbeth, J.

Salaman, R. N.

Smith, K. M.

Tate, P.

Ward, H. M.

Whittle, C. H.

Wortley, W. R.

Channel Islands

Gosselin, J.

Larbalestier, G. du B.

Marquand, E. D.

Small, T.

Cheshire

Balls, W. L.

Graddon, W. D.

Cornwall

Adams, A.

Ralfs, T.

Rilstone, F.

Tellam, R. V.

Cumbria

Hudson, W.

Martindale, J. A.

Potter, B.

Derbyshire

Bohler, J.

Croxall, H. E.

Gibbs, T.

Devon

Beaumont, A.

Brokenshire, F. A.

Caldwell, J.

Cox, A. E.

Cresswell, R.

Fuller, C. J.

Hiern, W. P.

Hiley, W. E.

Jones, J. P.

Kingston, J. F.

Larter, C. E.

Lasky, J.

Montague, A.

Parfitt, E.

Polwhele, R.

Prentice, I. W.
Ravenshaw, T. F. T.
Tarr, S. A. J.

Dorset

Dunston, A. E. A.
Galpine, J.
Jennings, R. D.
Linton, E. F.

Durham

Banbury, G. H.
Harriman, J.
Laurence, J.
Thornhill, J.
Wharton, E.
Wilson, R.

Essex

Buddle, A.
Dale, S.
English, J. L.
Forster, B. M.
Forster, E. (elder)
Forster, E. (younger)
Forster, T. F.
Gould, F. G.
Lister, A.
Lister, G.
Ray, J.
Shenstone, J. C.
Varenne, E. G.

Gloucestershire

Buckman, J.
Day, E. M.
Joshua, W.
Knight, H. H.
Notcutt, W. L.
Rhodes, P. G.
Weddell, H. A.

Hampshire

Eyre, W. L. W.
Rayner, J. F.
White, G.
Wilkinson, W. H.

Herefordshire

Bull, H. G.
Durham, M. L.
Lees, A.

Purchas, W. H.

Hertfordshire

Ashby, S. F.
Barton-Wright, E. C.
Bawden, F. C.
Bewley, W. F.
Brierley, W. B.
Buxton, E. W.
Cooper, C. A.
Corbett, W.
Gilbert, J. H.
Glynne, M. D.
Gregory, P. H.
Hopkinson, J.
Large, E. C.
Lawes, J. B.
Mann, H. H.
Moore, F. J. H.
Moore, W. C.
Pethybridge, G. H.
Potter, C.
Prentice, I. W.
Pryor, A. R.
Read, W. H.
Samuel, G.
Small, T.
Smith, A.
Smith, J. H.
Williams, P. H.

Isle of Man

Hopkins, J. C. F.

Huntingdonshire

Horton-Smith, C.

Isle of Wight

Eyre, W. L. W.

Kent

Barratt, K.
Bennett, M.
Connold, E. T.
Corbett, W.
Cropley, H.
Darwin, C.
Glasscock, H. H.
Hammond, J. B.
Harris, R. V.
Hoffman, G. R.

Horne, A. S.
Howard, A.
Hussey, A. M.
Keyworth, W. G.
Kidd, F.
Knight, R. L.
Martin, H.
Moore, M. H.
Piggott, H.
Salmon, E. S.
Scott, R.
Wormald, H. H.
Lancashire
Allegro, J.
Barrow, J.
Blackley, C. H.
Brittain, T.
Burgess, R.
Carrington, B.
Crabtree, J. H.
Ellis, J. W.
Fisher, H.
Flatters, A.
Green, C. T.
Grindon, L. H.
Hartley, J. W.
Higgins, H. H.
Johnson, W.
Leslie-Roberts, H.
Morris, L. E.
Roberts, W.
Rylands, T. G.
Taylor, S.
Travis, W. G.
Walkden, H.
Wardlaw, C. W.
Weiss, F. E.
Wheldon, H. J.
Wheldon, J. A.
Wilson, A.
Windsor, J.
Leicestershire
Carter, T.
Cooper, E. F.
Fisher, H.
Horwood, A. R.

Mott, F. T.
Pultney, R.
Reader, H. F.
Sowter, F. A.
Stirrup, H. H.
Lincolnshire
Cheales
Wallace, E. R.
Fowler, W. W.
Middlesex (see also London)
Butlin, R. K.
Cayley, D. M.
Hales, S.
Hawley, H. C. W.
Paulson, R.
Reynardson, S.
Norfolk
Arderon, W.
Badham, C. D.
Bryant, C.
Bryant, H.
Cooke, G. J.
Cooke, M. C.
Crowe, J.
Du Port, J. M.
Ellis, E. A.
Francis, R. B.
Howard, H. J.
Humphrey, W.
Markham, R.
Petch, C. P.
Petch, T.
Plowright, C. B.
Rose, H.
Smith, J. E.
Trimmer, K.
Turner, D.
Turner, J.
Woodward, T. J.
Northamptonshire
Berkeley, M. J.
Dixon, H. N.
Notcutt, W. L.
Northumberland
Bartlett, A. W.
Bennett, F. T.

Bidgood, J.
Ingram, J. T.
Perceval, C. H. S.
Potter, M. C.
Robertson, W.
Wallis, J.
Waugh, R.
Winch, N. J.
Nottinghamshire
Apinis, A. E.
Carr, J. W.
Deering, G. C.
Fisher, H.
Howitt, G.
Wilson, A.
Oxfordshire
Austin, R.
Baxter, W.
Beck, S. C.
Chain, E. B.
Church, A. H.
Clarke, L. L.
Day, W. R.
Dillenius, J. J.
Druce, G. C.
Florey, W. H.
Gilbert, J. H.
Harley, J. L.
Hiley, W. E.
Hughes, G. C.
Morison, R.
Osborne, T. G. B.
Peace, T. R.
Phillips, H. H.
Plot, R.
Sherard, W.
Trevisa, J. de
Sibthorp, J.
Somerville, W.
Wharton, H. T.
Wilkins, W. H.
Shropshire
Allen, W. S.
Houghton, W.
Phillips, W.
Preston, N. C.

Somerset
Atwood, M. M.
Barker, B. T. P.
Bond, T. E. T.
Bracher, R.
Briton-Jones, H. R.
Broome, C. E.
Bucknall, C.
Clark, A.
Clark, J. A.
Cox, A. D.
Croxall, H. E.
Darbyshire, O. V.
Dodd, A. J.
Fry, E.
Kearns, H. G. H.
Hawker, L. E.
Lechmere, E. E.
Ogilvie, L.
Simms, A. P.
Stephens, H. O.
Turner, W.
Watson, W.
Wheeler, E.
Staffordshire
Bayliss-Elliott, J. S.
Bagnall, J. E.
Brown, H. T.
Buller, A. H. R.
Cruickshank, C. N. D.
Darwin, E.
Elliott, W. T.
Garner, R.
Gemmell, A. R.
Groves, W. B.
Harrold, C. E.
Hickman, C. J.
Jinks, J. L.
Withering, W.
Withering, W. (fil.)
Suffolk
Babbington, C.
Badham, C. D.
Bloomfield, E. N.
Gage, T.
Henslow, J. S.

Hind, W. M.
Kirby, W.
Mayfield, A.
Sidney, E.
Stock, D.
Stone, R.
Surrey (see also London)
Arden, M. E.
Ashby, S. F.
Ashworth, D.
Baker, J. G.
Bancroft, C. K.
Batko, S.
Beer, R.
Bisby, G. R.
Blackwell, E. M.
Butler, E. J.
Charlesworth, J.
Chillenden, F. J.
Cooke, M. C.
Cotton, A. D.
Dade, H. A.
Deighton, F. C.
Dring, D. M.
Early, W.
Green, D. E.
Hooker, J. D.
Hooker, W. J.
Hopkins, J. C. F.
Horton-Smith, C.
Laundon, G. F.
Madge, M.
Martyn, E. B.
Mason, E. W.
Mason, U.
Massee, G.
Massee, I.
Owen, M. S.
Pearson, A. A.
Pratt, C. A.
Ramsbottom, J. K.
Read, W. H.
Scott, D. H.
Sharples, A.
Sprague, T. A.
Stockdale, P. M.

Swanton, E. W.
Thiselton-Dyer, W. T.
Wakefield, E. M.
Wiltshire, S. P.
Worsdell, W. C.
Sussex
Arnold, E. H.
Bacon, A. S.
Bloomfield, E. N.
Borrer, W.
Jenner, E.
Jones, G. H.
Morgan, G.
Notcutt, W. L.
Roper, F. C. S.
Stephenson, G. B.
Wood, F. C.
Warwickshire
Aylesford, L.
Bloxam, A.
Clark, M. C.
Keyworth, W. G.
Power, J.
Purton, T.
Russell, A.
Westmorland (see Cumbria)
Worcestershire
Griffiths, G. H.
Lees, E.
Rea, A. E.
Rea, C.
Rufford, W. S.
Swanton, E. W.
Wiltshire
Aubrey, J.
Bowen, S.
Hurst, C. P.
Tatum, E. J.
Yorkshire
Bairstow, U.
Baker, T. G.
Beaumont, A.
Bellerby, W.
Bolton, J.
Bradbury, F.
Broadhead, C. H.

Broadbent, A.
 Brunton, W.
 Burgess, R.
 Burrell, W. M.
 Cheeseman, W. N.
 Clarke, A.
 Cooper, C. A.
 Crossland, C.
 Currie, J. F.
 Dalton, J.
 Dallinger, W. H.
 Deakin, R.
 Dewhurst, J.
 Dixon, G.
 Elgee, P.
 Flintoff, T.
 Fowler, W. W.
 Gibbs, T.
 Grainger, Jennie
 Grainger, John.
 Gray, P.
 Hailstone, S.
 Hebden, T.
 Hey, T.
 Hick, T.
 Hilary, D.
 Hinks, W.
 Hobkirk, C. C. P.
 Ingram, J. T.
 Jones, A. M.
 Jones, R. C. F.
 La Touche, C. J.
 Lees, F. A.
 Leyland, R.
 Lister, M.
 McIvor, W. G.
 Mason, F. A.
 Miall, L. C.
 Millard, W. A.
 Mills, F. W.
 Neehdam, J.
 Nowell, J.
 Nowell, W.
 Parsons, H. F.
 Payne, J. H.
 Peck, A. E.
 Plues, M.
 Richardson, R.
 Robinson, T.
 Robson, E.
 Robson, S.
 Roe, T. B.
 Roebuck, W. D.
 Rutly, W.
 Salt, J.
 Saunderson, A. R.
 Sibbald, R.
 Soppitt, H. T.
 Spruce, R.
 Stansfield, A.
 Stansfield, T.
 Teesdale, R.
 Thwaites, W. A.
 Wager, H. W. T.
 Wattam, W. E. S.
 West, W.
 Western, J. H.
 White, F. B.
London (see also Middlesex and Surrey)
 Adams, G. (1720-86)
 Adams, G. (1750-95)
 Adamson, H. G.
 Ayres, P. B.
 Baker, H.
 Banks, J.
 Barker, T.
 Barnes, B. F.
 Barton-Wright, E. C.
 Batts, C. C. V.
 Bennett, A. W.
 Berridge, E. M.
 Birkbeck, G.
 Blackman, V. H.
 Blaxall, F. R.
 Bossey, F.
 Brett, M. A.
 Brown, W.
 Bulloch, W.
 Bunker, H. J.
 Butcher, R. W.
 Carpenter, W. B.
 Carruthers, W.

Castellani, A.
Chapman, A. C.
Collard, P. J.
Cooke, L. A.
Cooke, M. C.
Cope, Z.
Crombie, J. M.
Culpepper, N.
Cunningham, D. D.
Curtis, W.
De Crespigny, E. C.
Dandridge, J.
Dickson, R.
Doody, S.
Duncan, J. T.
Duncan, P. M.
Duppa, A. F. M.
Findlayson, D.
Fleming, A.
Forsyth, W.
Fox, T. C.
Fox, W. T.
Galloway, L. D.
Gerard, J.
Graves, G.
Gray, A. M. H.
Gray, J. E.
Gray, S. F.
Green, J. R.
Groom, P.
Gulliver, G.
Güssow, H. T.
Gwynne-Vaughan, H. C. I.
Hardwicke, R.
Hart, J. W.
Hassall, A. H.
Hastings, S.
Henfry, A.
Hicks, J. B.
Highly, P.
Hogg, J.
Hogg, R.
Holmes, E. M.
Hooke, R.
How, W.
Huxley, T. H.

Johnson, C.
Johnson, C. P.
Johnson, G. W.
Johnson, T.
Jones, A. C.
Kippist, R.
Knowles, J.
Lacey, M. S.
Lamb, I. M.
Lister, J. J.
Lousley, J. E.
Mcfadyean, J.
McLeod, J. M. H.
MacLeay, W. S.
Manson, P.
Marriott, St. J.
Massey, R. M.
Masters, M. T.
Merrett, C.
Miller, P.
Morris, M. A.
Mortimer, J.
Muende, I.
Murray, G. R. M.
Murray, I. G.
Needham, J. T.
O'Connor, P.
Owen, R.
Paine, S. G.
Pallin, W. A.
Parkinson, J.
Petiver, J.
Plukenet, L.
Quekett, E. J.
Quekett, J. T.
Raistrick, H.
Ramsbottom, J.
Rayner, M. C.
Rhodes, M.
Riddell, R. W.
Robinson, W.
Rolfe, F. W.
Rolfe, R. T.
Rook, A.
Roxburgh, A. C.
St John-Brooks, R. T.

Saunders, W. W.
Savill, A. F.
Schwartz, E. J.
Scott, D. H.
Sherard, T.
Sinclair, J.
Sloane, H.
Smieton, M. J.
Smith, A. L.
Smith, F. P.
Smith, G.
Solly, E.
Sowerby, J.
Sowerby, J.
Sowerby, J. E.
Sowerby, W.
Stenhouse, J.
Step, E.
Tabor, R. T.
Theobald, F. V.
Topping, M. P.
Tyndall, J.
Wakely, C. T. N.
Waterston, A. P.
Watson, W.
White, C. F.
Whitfield, A.
Williamson, H. S.
Wilson, G. S.
Wilson, M.
Ireland
Adams, J.
Alexander, W. T.
Andrews, W.
Archer, W.
Barker, J.
Cairns, H.
Carrol, I.
Carrol, T.
Davidson, W. D.
Frazer, W.
Gage, T.
Hartog, M. M.
Harvey, J. R.
Hassall, F. C.
Johnson, T.

Johnston, J. F. W.
Jones, T.
Knowles, M. C.
Lafferty, H. A.
Lett, H. W.
Loughnane, J. B.
McArdle, D.
McBain, A. M.
McIvor, W. G.
Mackay, J. T.
Mackay, R.
Macleay, W. S.
McNab, W. R.
McWeeney, E. J.
Moore, D.
Moore, F. W.
Murphy, P. A.
Murray, D.
Muskett, A. E.
Pethybridge, G. H.
Pim, G.
Porte
Porter, L. E.
Power, T.
Praeger, R. L.
Stelfox, M. D.
Taylor, T.
Templeton, J.
Threlkeld, C.
Tighe, W.
Wade, W.
Wright, E. P.
Scotland
Alcock, N. L.
Anderson, T. McCall
Ashworth, J. H.
Balfour, F. R. S.
Balfour, I. B.
Balfour, J. H.
Barger, G.
Barton-Wright, E. C.
Bell, E.
Bennett, J. H.
Boyd, D. A.
Bradbury, F.
Brian, P. W.

Brook, G.
Burgess, T.
Cadman, C. H.
Callen, E. O.
Carmichael, D.
Cran, W.
Crombie, J. M.
Currie, J. F.
Dickie, J.
Dickson, J.
Don, G.
Downie, D. G.
Duncan, U. K.
Edmundson, T.
Evans, W.
Farquarson, C. O.
Ferguson, J.
Foister, C. E.
Gardiner, W.
Gibson, T.
Grainger, J.
Greville, R. K.
Hardy, J.
Hennedy, R.
Hope, J.
Hopkirk, T.
Jerdon, A.
Johnson, G.
Johnston, J. F. W.
Johnstone, R. B.
Keith, J.
King, T.
Klotsch, J. F.
Lawson, J.
Lightfoot, J.
Lister, J.
Lyell, C.
Lyon, G. J.
McAlpine, D.
McAndrew, J.
McBain, A. M.
MacGarroch, J. B.
McIntosh, C.
Maddox, R. L.
Menzies, J.
Paul, D.

Prentice, I. W.
Rauter, F.
Sadler, J.
Smith, C.
Smith, W. Gardiner
Stevenson, J.
Stirton, J.
Thin, G.
Trail, J. W. H.
Wilson, J. H.
Wilson, M.
Wales
Davies, D. W.
Davies, H.
Dillwyn, L. W.
Evans, E. P.
Griffiths, J. E.
Griffiths, J. W.
Hodgson, A. S.
Hyde, H. A.
Isaac, I.
Ivimey-Cooke, W. R.
Jones, D. A.
Parker-Rhodes, A. F.
Rees, J.
Richards, M.
Robinson, W. (1885-1930)
Salway, T.
Sampson, K.
Trow, A. H.
Vize, J. E.
Wade, A. E.
Whitehead, T.
Williams, D. A.
OVERSEAS
Australia
Cheel, E.
Farrer, W. J.
Grant, A.
Knight, C.
McAlpine, D.
MacLeay, W. S.
Osborne, T. G. B.
Shirley, J. E.
Steel, T.
Tryon, H.

- Belize** see British Guiana
Bermuda see West Indies
British Guiana (Belize)
 Barlett, A. W.
 Martyn, E. B.
Canada
 Adams, J.
 Bisby, G. R.
 Buller, A. H. R.
 Callen, E. O.
 Gregory, P. H.
 Güssow, H. T.
 Hickman, C. J.
 Martin, H.
 Stockdale, P. M.
Ceylon (see Sri Lanka)
China
 Mason, P.
Egypt
 Balls, W. L.
 Briton-Jones, H. R.
 Jones, G. H.
Federated Malay States (see Malaysia)
France
 Needham, J. T.
Ghana (Gold Coast)
 Bunting, R. H.
 Dade, H. A.
 Dring, D. M.
 Murray, I. G.
Hawaii
 Lewton-Brain, L.
India
 Barclay, A.
 Butler, E. J.
 Carter, H. V.
 Cunningham, D. D.
 Galloway, L. D.
 Howard, A.
 Hutchinson, C. M.
 McIvor, W. G.
 McRae, W.
 Maingay, A. C.
 Mann, H. H.
 Shaw, E. J. P.
 Sutcliffe, H.
 Watt, G.
Jamaica see West Indies
Kenya
 Dümmer, R. A.
Malaysia
 Bancroft, C. K.
 Brooks, F. T.
 Burkill, E. M.
 Carruthers, J. B.
 Chipp, T. F.
 Lewton-Brain, L.
 Ridley, H. N.
 Stirrup, H. H.
New Zealand
 Curtis, K. M.
 Knight, C.
 Laundon, G. F.
Nyasaland
 Leach, R.
Phillipines
 Dampier, W.
Sierra Leone
 Deighton, F. C.
Singapore (included with Malaysia)
Southern Rhodesia
 Hopkins, J. C. F.
South Africa
 Pole-Evans, I. B.
 Storey, H. H.
Sri Lanka
 Bond, T. E. T.
 Carruthers, J. B.
 Castellani, A.
 Chalmers, A. J.
 Morris, D.
 Petch, T.
 Stoughton, R. H.
 Thwaites, G. H. K.
Straits Settlements see Malaysia
Sudan
 Archibald, R. G.
 Chalmers, A. J.
 Knight, R. L.
 Tarr, S. A. J.
Tanganyika
 Storey, H. H.

Trinidad, see West Indies

Uganda

Dümmer, R. A.

Hansford, C. G.

Hopkins, J. C. F.

USA

Meehan, T.

West Indies

Ashby, S. F.

Baker, R. E. D.

Briton-Jones, H. R.

Howard, A.

Leach, R.

Lewton-Brain, L.

Lipscome, C.

Martyn, E. B.

Morris, D.

Nowell, W.

Ogilvie, L.

Shiple, A. E.

Stockdale, F. A.

Willisel, T.

Institutes, Laboratories, Societies, etc (Universities are allocated to counties)

Addenbrooks Hospital, C. H. Whittle
Agricultural Research Council (ARC), E. J. Butler, J. L. Jinks
Agricultural Society of Scotland, J. F. W. Johnston
Akers Research Laboratories, P. W. Brian
Albert Institute, Glasnevin, T. Carrol, E. J. McWeeney
Alice Holt Station, S. Batko
Anderson College, Glasgow, G. Birkbeck, T. Edmondston, R. Kennedy, T. King
Ashmolean Museum, Oxford, H. Plot

Bedford College, A. W. Bennett
Belfast Naturalists' Field Club, H. W. Lett
Berwickshire Naturalists' Club, G. Johnston
Biological Council, W. P. K. Findlay
Birkbeck College, London, B. F. Barnes, G. Birkbeck, H. C. I. Gwynne-Vaughan
Botanical Record Club, F. A. Lees
Botanical Society of Edinburgh, T. Edmondston
Brighton Technical College, A. S. Bacon
British Flour Millers' Research Association (Cereal Research Station), E. C. Barton-Wright
British Mycological Society: Cheeseman Fund; W. N. Cheeseman; origin; A. Clarke; Plant Pathology Committee; A. D. Cotton, W. Buddin
British Pharmaceutical Society Museum, E. M. Holmes
British Society for Mycopathology, C. J. La Touche, J. Ramsbottom, M. Richards, C. H. Whittle
Brompton Hospital, R. W. Riddell
Bungay Botanical Society, R. Stone

Cambridge Botanic Garden, W. Mudd
Charing Cross Hospital, W. T. Fox, I. Muende, J. M. H. Mcleod, G. Morgan
Chelsea Physic Garden, S. Doddy, P. Miller, H. Sloane
Commonwealth Mycological Institute, see International Mycological Institute
Cryptogamic Society of Scotland, D. Paul

Dept of Agriculture for Scotland, N. L. Alcock, C. E. Foister
Devon and Exeter Hospital, C. J. Fuller
Devonshire Association, F. A. Brokenshire, W. P. Hiern, C. E. Larter, E. Parfitt
Ditton Laboratory; East Malling, F. Kidd
Dorset Trust for Conservation, R. D. Jennings
Dublin Botanic Garden, W. Wade
Dublin Microscopic Club, W. Archer, J. Baker, E. O'Meara
Dublin Royal College of Science, R. McKay, P. A. Murphy
Dublin Seed Testing Stn, T. Johnson (1863-1954), R. Copley

East Malling Research Stn, M. Bennett, M. H. Moore, R. V. Harris, J. W. Prentice, H. H. Wormald

East of Scotland Agricultural College, A. E. W. Boyd
Edinburgh Royal Botanic Garden, I. B. Balfour, J. H. Balfour, R. McNabb
Edinburgh Veterinary College, W. Dick, J. McFadyean
Essex Field Club, J. English, G. Lister

Flatford Mill, A. F. Parker-Rhodes
Forest Products Research Laboratory, K. St G. Cartwright, W. P. K. Findlay
Glasgow West of Scotland Technical College, B. Ellis
Glasgow Hospital for Diseases of the Skin, T. McC. Anderson
Glasnevin Botanic Gardens, see National Botanic Gardens, Glasnevin
Greenwich Naturalists' Society, F. Currey
Guy's Hospital, J. B. Hicks

Hertfordshire Natural History Society, J. Hopkinson
Huddersfield Naturalists' Society, G. Brook, C. C. Hobkirk

Imperial Bureau of Mycology, see International Mycological Institute
Imperial Chemical Industries, F. Bradbury
Imperial College of Tropical Agriculture, Trinidad, S. F. Ashby, R. E. D. Baker, H. E.
 Briton-Jones, A. E. Shipley
Imperial Mycological Institute, see International Mycological Institute
Indian Medical Service, A. Barclay
International Mycological Institute: culture collection, H. A. Dade; directors, S. F. Ashby, E. J.
 Butler, J. C. F. Hopkins, S. P. Wiltshire; mycologists, G. R. Bisby, G. F. Laundon, E. W.
 Mason; publications, S. P. Wiltshire
Islington Dispensary, P. B. Ayres

Jealott's Hill Research Station, P. W. Brian
John Innes Horticultural Institute, D. M. Caley

Kendal Natural History Society, J. H. Martindale
Kew, Royal Botanic Gardens: F. A. Bauer; directors, J. D. Hooker, W. J. Hooker, W. T.
 Thiselton-Dyer; Jodrell Laboratory, D. H. Scott, C. K. Bancroft; mycologists, M. C.
 Cooke, A. D. Cotton, G. E. Masee, E. M. Wakefield; origin, J. Crowe
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Lichen Exchange Club, A. R. Horwood, H. P. Reader
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Ministry (Board) of Agriculture, Plant Pathology Laboratory, Harpenden, origin: A. D. Cotton;
plant pathologists, N. L. Alcock, W. B. Brierley, A. D. Cotton, G. H. Pethybridge, I. W. Prentice, G. Samuel, A. Smith, F. J. H. Moore, W. C. Moore
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National Collection of Type Cultures, M. Rhodes, R. T. St John Brooks
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herbarium: E. Foster (the younger)
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St Mary's Hospital, Z. Cope, J. M. Crombie, C. J. La Touche, M. A. Morris
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Scottish Crops Research Institute, C. M. Cadman
Scottish Horticultural Research Institute, see Scottish Crops Research Institute
Scottish Cryptogamic Society, D. A. Boyd, J. Fergusson
Scottish Microscopical Society, G. Brook
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Shirley Institute, L. D. Galloway
Skolholm Island, A. F. Parker-Rhodes
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Woburn Experimental Station, H. H. Mann
Woolhope Club, H. G. Bull
Worcester Literary and Scientific Institute, S. Lees
Worcester Natural History Society, G. H. Griffiths
Wye College, Kent, E. S. Salmon

Yorkshire Naturalists' Union, Mycological Committee, W. Fowler (origin), C. Crossland
(secretary), Jennie Grainger, F. A. Mason, G. E. Masee, I. Masee, A. E. Peck, W. D.
Roebuck, H. W. T. Wager, W. E. S. Wattam

Exsiccata of Fungi and Lichens

- Ayers, P. B. (1845). *Mycologia Britannici*.
- Baxter, W. (1825, 1828). *Stirpes Cryptogammae Oxoniensis*.
- Berkeley, M. J. (1836-43). *British Fungi* (4 fasc., 350 spec).
- Bohler, J. (1835-7). *Lichenes Britannici* (128 spec. (or drawings) by R. Deakin).
- Carroll, I. (1859). *Lichenes Hibernici Exsiccati*.
- Croall, A. (1857). *Plants of Braemar* (4 fasc., 602 spec.).
- Crombie, J. M. (1870). *Lichenes Britannici Exsiccati*.
- Dickson, J. (1793-1802). *Fasciculus Plantarum Cryptogamicarum*, (4 fasc.).
- Dickson, J. (1789-91). *A Collection of Dried Plants*, (4 fasc., 100 spec.).
- Dickson, J. (1793-1802). *Hortus Siccus Britannicus*, (19 fasc.).
- Don, G. (1804-12). *Herbarium Britannicum*, (9 fasc., 225 spec.).
- Johnson, W. (1894-1918). *North of England Lichen Herbarium*, (13 fasc., 520 spec.).
- Joshua, W. (1879). *Microscope Slides of British Lichens*, (48 slides).
- Larbalestier, C. de B. (1867-72). *Lichenes Caesariensis et Sargienses*, (6 fasc., 283 spec.).
- Larbalestier, C. de B. (1878-81). *Lichen-Herbarium* (9 fasc., 160 spec.).
- Larbalestier, C. de B. (1896). *Lichenes Exsiccati Circa Cantabrigiam Collecti* (35 spec.).
- Vize, J. E. (1873-5). *Fungi Britannici*.
- Vize, J. E. (1875-88). *Microfungi Britannici*.
- Vize, J. E. (1883). *Microfungi Exotici*.