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COLLECTIONS FROM THE INDIAN SUBCONTINENT IN THE HERBARIA OF THE NATURAL HISTORY MUSEUM, LONDON

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INTRODUCTION

The herbaria of The Natural History Museum, (BM) London, contain an estimated 4.5 million specimens, of which approximately 112,000 are types. The earliest of these specimens were collected early in the seventeenth century, and approximately 11,800 specimens are added to the collections each year. The herbaria are worldwide in scope, and include all groups of plants excluding non-lichenised fungi.

The Museum has a policy of actively encouraging the use of its collections, and researchers are welcome to visit the herbaria, or request specimens on loan.

In the following account the Indian subcontinent is defined as stretching from Afghanistan and Pakistan in the west across to Burma in the east, and bounded by Kashmir, Nepal and Assam (*s.l.*) on the north. In addition to the collections mentioned there are many thousands of smaller collections from many parts of the subcontinent. Dates of birth and death have been given for most collectors, but in the case of some, particularly twentieth century, collectors this has not proved possible.

Pre-1800 collections :

The earliest collections in the herbaria are those in the herbarium of Hans Sloane (1660-1753) which is bound in 337 volumes and thus kept as a separate unit. Although several of the volumes have titles which imply that their contents are primarily Indian, these titles are misleading for it appears that almost anything collected east of the Cape of Good Hope (or, indeed, at the Cape itself) was described as "Indian." Thus volume 219 bears the title "Plantae ex India orientali receptae 1716" but contains plants which were, for the most part, collected in Japan. However, specimens from the Indian subcontinent are present in the herbarium. For example, Indian plants can be found in volume 127 (pp. 21-24, 33, 36, 44bis & 45), Sri Lankan plants in volume 91 (pp. 128 & 190) and Burmese plants in volume 290 (pp. 31 & 46). A valuable synopsis of the contents of, and contributors to, the Sloane herbarium is provided by Dandy, 1958.

Of greater interest and value to students of Indian botany is the herbarium of Paul Hermann (1640-1695), containing the plants collected by Hermann in Sri Lanka in *c.* 1672 1677, on which Linnaeus based is *Flora Zeylanica* (1747). This herbarium, like the Sloane herbarium, consists of bound volumes : four volumes of plants and one volume of drawings. Information on the Hermann herbarium is given in Trimen, 1888.

The Hermann herbarium formed part of the botanical collections assembled by Joseph Banks (1753 1820) which formed the nucleus from which the main herbaria evolved. Noteworthy among the other collections from the Indian subcontinent in the Banks, herbarium are the following :

F. Buchanan, later known as Hamilton, or Buchanan-Hamilton, (1762-1829) from whom Banks received Avan plants in 1794 (see Britten, 1902) and Chittagong plants in 1798. More

important are 674 specimens collected by Buchanan in Nepal, Mysore and Malabar which were bought at the sale of the collections of A. B. Lambert's collections in 1842 and include type material of species described by D. Don in his *prodromus florae nepalensis* (1825).

J. G. Koenig (1728 1785) who sent plants to Banks in 1776 and bequeathed to Banks his herbarium and manuscripts.

J. Robertson (fl. 1760s 1770s) who sent plants from Bombay and Madras (and also from Johanna Island, China and St Iago) to Banks in 1772 1776.

W. Roxburgh (1751 1815) who sent plants to Banks in 1794 and 1798 (and from whose herbaria further material was obtained when the Museum acquired the herbarium of Robert James Shuttleworth in 1877).

The Societas Unitatis Fratrum (i.e. Moravian Brethren) who sent about 500 specimens from Tranquebar in 1775 and 1778.

Nineteenth century collections :

Details of collections acquired by the Museum before 1903 are given in Anon., 1904, and a masterly overview of pteridophyte collections acquired from the Indian subcontinent is provided by Fraser-Jenkins, 1984. Important accessions received during the nineteenth century include collections from :

J. E. T. Aitchison (1836 1898) : 618 specimens from Afghanistan presented in 1880 1881, and a set of plants colleted on the Afghan Boundary Expedition of 1884 1885.

R. H. Beddome (1830 - 1911) : herbarium of Indian plants, containing approximately 10,000 specimens, including many types of species described in his *Ferns of British India* (1865 1886), and many bryophytes.

C. B. Clarke (1834 - 1906) : 11,155 specimens of Indian plants presented in 1875 - 1897. Clarke also worked in the flowering plant and pteridophyte herbaria, annotating many specimens.

J. F. Duthie (1845 1922) : 4,140 specimens of flowering plants and 553 specimens of cryptogams acquired in 1881 1900.

W. Ferguson (1820 1887) : many specimens of marine algae from Sri Lanka and southern India.

G. Gardner (1812 1849) : collection of Sri Lankan plants, including many bryophytes, acquired in the herbarium of John Miers in 1879.

W. Griffith (1810 - 1845) : a large collection of Bhutanese plants presented by the East India Company in 1849 1850.

J. W. Helfers (d. 1840) : a set of his "Fl. Ind. Orient." acquired with the Shuttleworth herbarium in 1871.

J. D. Hooker (1817 1911) & T. Thomson (1817 1878) : a set of their 1847 1855 Himalayan collections presented in 1855 1861.

W. S. Kurz (1833 1878) : a large number of 1860s 1870s collections from the Andaman Islands, India and Burma.

J. Macrae (fl. 1823 1830) : 1,079 Sri Lankan plants purchased in 1856.

E. Mann (fl. 1890s) : a large number of bryophyte specimens from the Andaman Islands.

A. Moon (d. 1825) : 373 Sri Lankan plants sent to Banks in 1819.

C. Parish (1822 1897) : large collection of bryophytes made in Burma in the 1860s.

The Royal Botanic Gardens, Calcutta : approximately 15,500 specimens from India and Malaya received between 1886 and 1917.

Schlagintweit brothers (fl. 1850s) : 2,050 specimens from the Himalayas and Tibet purchased in 1886 and 1900.

J. Stirton (1833 1917) : did not collect in India, but was especially interested in Indian lichens, which are well represented in his herbarium, now in the Museum.

R. Strachey (1817 1908) & J. E. Winterbottom (1803 1854) : Himalayan herbarium, comprising of 1,747 specimens presented by the East India Company in 1852.

G. H. K. Thwaites (1811-1862) : 2861 Sri Lankan specimens, including lichens described by Leighton, 1870.

N. Wallich (1786 1854) : a set of his Indian, Nepalese and Malayan plants presented by the East India Company between 1829 and 1849.

R. Wight (1796 1872) : a large collection Indian plants, including bryophytes, purchased from the executors of N. B. Ward in 1869.

A. P. Young (1841 1920) : a large collection of Indian plants purchased in 1884.

Twentieth century collections :

During the first 70 years of the twentieth century the Museum acquired many specimens of flowering plants from Bhutan, Kashmir, Nepal and Sikkim, since that time accessions of flowering plants from the subcontinent have been few, although the Museum does maintain an exchange programme with the University of Karachi. Details of the Nepalese collections, which were extensively studied during the preparation of *Enumeration of the Flowering Plants of Nepal* (Hara *et al.* 1978 1982) are given in Sutton, 1978. The Museum's holdings of flowering plants from Bhutan and Sikkim are currently being studied by staff of the Royal Botanic Garden, Edinburgh, as they prepare their *Flora of Bhutan* (Grierson & Long, 1883).

In 1940 a fire bomb caused extensive damage to the Museum's holdings of Ericaceae and Poaceae, thus pre-1940 collections of these families tend to be poor.

Important collections, apart from those from Nepal, acquired during the twentieth century include those of :

J. Abel : *c.* 180 specimens collected in the Kagan Valley, Pakistan in 1954.

G. O. Allen (1883 1963) : many specimens of Indian charophytes.

A. H. G. Alston (1902 1958) : many specimens of bryophytes and pteridophytes collected in Sri Lanka between 1926 and 1931.

D. D. Awasthi and associated workers : many specimens of lichens.

T. H. Barbour (fl. 1910s 1920s) : 331 specimens from the Murree Hills and Kashmir presented in 1923.

S. Bowes - Lyon : extensive collections made in Bhutan in 1966 1971, Chitral in 1958 and Sikkim in 1966 and 1971.

G. H. Cave (*c.* 1870 1965) : many Sikkim plants acquired from the Royal Botanic Garden, Edinburgh in 1915.

R. E. Cooper (1890 1962) : 1921 flowering plants and 135 pteridophytes from Bhutan acquired from Edinburgh in 1916.

J. R. Drummond (1851 1921) : 191 flowering plant specimens presented in 1911.

G. Foreau : many bryophyte specimens collected in southern India in the 1920s.

C. R. Fraser-Jenkins : extensive pteridophyte collections from India and the Himalayas.

Gordon Herbarium, Rawalpindi : many specimens received from the early 1950s to the mid 1960s.

C. W. W. Hope (1832 1904) : *c.* 630 pteridophytes presented in 1904.

P. P. Huggins : *c.* 600 specimens, including cryptogams, collected while on the Oxford University Expedition to Tehri-Garhwal in 1952.

R. Kaulback : 388 specimens, including cryptogams, from Upper Burma presented 1939 1940.

A. F. G. Kerr (1877 1942) : bequeathed his personal herbarium to the Museum; although the majority of the specimens are from Thailand, there are also some collections from Burma.

F. H. W. Kerr (1855 1958) : 1,000 specimens of flowering plants from Chota Nagpur, presented in 1952 1955.

F. Kingdon-ward (1895 1958) : many specimens from his expeditions to India (Assam) and Burma. For a summary of Kingdon-Ward's

collecting activities, and the distribution of his collections *see* Stearn, 1960.

C. C. Lacaita (1853 1933) : *c.* 4,000 specimens, including cryptogams, from Sikkim.

F. Ludlow (1885 1972), G. Sherriff (1898 - 1967) and associated collectors : extensive collections, amounting to some 21,000 specimens from Bhutan, Kashmir, Sikkim (and Tibet.) A summary of Ludlow and Sherriff's collecting activities in given by Stearn, 1976.

A. H. Norkett (1915 1989) : *c.* 5,000 bryophytes collected in Nepal in 1961 1962, and *c.* 7,000 bryophytes collected in India in 1966 1967 and 1970 1971. Norkett was on the staff of the Museum for many years and developed a special interest in Indian bryophytes, which resulted in many small collections of bryophytes from the subcontinent being presented to the Museum.

O. Polunin : collections from Karakoram in 1960, and Darjeeling and Kashmir in 1969; also many specimens from Nepal.

G. Popov : large collection of flowering plants made in Baluchistan in the 1960s.

R. S. Russell : 859 specimens collected on Shipton's Expedition to Karakorum in 1939.

E. A. C. L. E. Schelpe (1924 1985) : *c.* 550 specimens collected in the Punjab and Bengal in 1952.

L. J. Sedgwick (1883-1925) : large collection of bryophytes made in the 1920s.

J. D. A Stainton (1921-1991) : main collections from Nepal, but also colleted in Chitral in 1958, Kashmir in 1965, Himachal Pradesh in 1976 and 1983, and Garhwal in 1978.

W. Thesiger : many specimens collected in north-east Afghanistan in 1956.

Tokyo University Expeditions : extensive collections made in eastern India and the Himalayas between 1960 and 1972.

CONCLUSION

Although the Natural History Museum has not maintained long term formal contact with any botanical institution in the Indian subcontinent, it holds important and well curated material, the oldest of which was collected over 300 years ago, from the subcontinent. It also holds extensive collections from surrounding regions southwest Asia and China and an excellent botanical library. Plant taxonomists working in the Indian subcontinent are encouraged to use these resources.

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