

Flora Botanica

JOSÉ MUTIS' GRAND BOTANICAL EXPEDITION

Fiona Massy reveals the colourful history behind one of the Library's outstanding botanical works

In December 2006, the Spanish Embassy presented to the National Library of Australia a magnificent gift in the form of 16 volumes entitled *Flora de la Real Expedición Botánica del Nuevo Reyno de Granada (1783–1816)*, on the occasion of the fourth centenary of the voyages of de Quirós and Torres to the South Pacific. These large folio books contain reproductions of late eighteenth- and early nineteenth-century tempera and watercolour paintings of flora from New Granada, an area now occupied by Colombia, Panama, Venezuela and Ecuador. Accompanying the *Flora Botánica* is the two-volume English edition of *Mutis and the Royal Botanical Expedition of the Nuevo Reyno de Granada*, donated to the Library by Gonzalo Nieto, Director of the Royal Botanical Gardens in Madrid. This generous addition makes the *Flora Botánica* more accessible to non-Spanish readers. While studying the luminosity and delicacy of the illustrations, I began to search for the tale behind this wonderful collection.

The story began with an extraordinary man named José Celestino Mutis, who was born in Cádiz in 1732, the son of a bookseller. He attended the University of Seville, where he studied medicine and philosophy. While undertaking further studies in medicine and botany in Madrid, he also pursued interests in astronomy, geography, and mathematics. He became well established at the court of Charles III, and the prospect of a brilliant medical career lay ahead of him. In 1760, however, the New World beckoned and, at the age of 29, he set out for New Granada, accompanying the incoming Spanish viceroy as his personal physician. He arrived at Santa Fe de Bogotá on 24 February 1761. This small town was



set against the hills, on a large Andean plateau at a height of 2635 metres.

Mutis was a man who seized opportunities and pursued many interests. We find him being ordained as a priest in 1772, as well as working on more temporal matters. He corresponded regularly with Carl Linnaeus, and in a letter to the great Swedish scientist in 1767, he wrote: 'I tell you, what I have seen in this region surpasses everything that travellers have admired in all other parts of

Hypochaeris sessiliflora reproduced from *Flora de la Real Expedición Botánica del Nuevo Reyno de Granada* (Madrid: Agencia Española de Cooperación Internacional, 2004)



above left:
Unknown artist
José Celestino Mutis
reproduced from *Mutis and the Royal Botanical Expedition of the Nuevo Reyno de Granada*, Ma. Pilar de San Pio Aladrén (ed.) (Bogota: Villegas Editores, 1992)

above right:
Senna multiglandulosa
reproduced from *Flora de la Real Expedición Botánica del Nuevo Reyno de Granada* (Madrid: Agencia Española de Cooperación Internacional, 2004)



the world.' He investigated the cinchona (quinine) tree, useful in treating malaria, and made plans for transporting it back to Spain. In 1777, Mutis was energetically propagating strawberries in the mountains, undertaking new mining ventures, teaching students in physics and mathematics, receiving books from Linnaeus, and developing an excellent library which he shared with his students. He worked as a doctor for the rest of his life in New Granada, and his medical duties included sourcing a vaccine to control smallpox, as well as encouraging hygienic practices among the local people. He also introduced reforms in the teaching of medicine in Santa Fe de Bogotá.

For 20 years, Mutis corresponded with Spanish court officials about his plans to mount a botanical expedition into New Granada. Permission was finally granted by royal decree from Charles III. After much preparation, the expedition set out shortly after midday on 29 April 1783, Mutis' diary relating that 'the bright sunlight was tempered by that cool bracing wind that blows regularly on the savannah'. He

planned to explore all the territory from Ecuador to the isthmus of Panama, but perhaps didn't envisage that the expedition would last for 33 years! Scientific objectives of the expedition included astronomical observations and topographical surveys as well as the gathering and study of cinchona bark, and 'other plants useful for trade'. Colour pigments were sourced for expedition artists from the earth and from available plants including lichens, and the brazilwood tree from which a red dye was extracted. Members of the expedition included 'adjutants, commissioners, scribes, draughtsmen, and herborists'. Although there were several other Spanish expeditions to the New World at this time, Mutis' grand expedition was the most carefully prepared, lasted for the greatest length of time, and was the most expensive. After collecting plants in the field, the drawing, pressing and drying of the botanical specimens took place in a permanent studio. This was established in Mariquita, in 1783, and later moved to the Casa de la Botanica in Bogotá. The studio

and art school became the centre of the country's academic life.

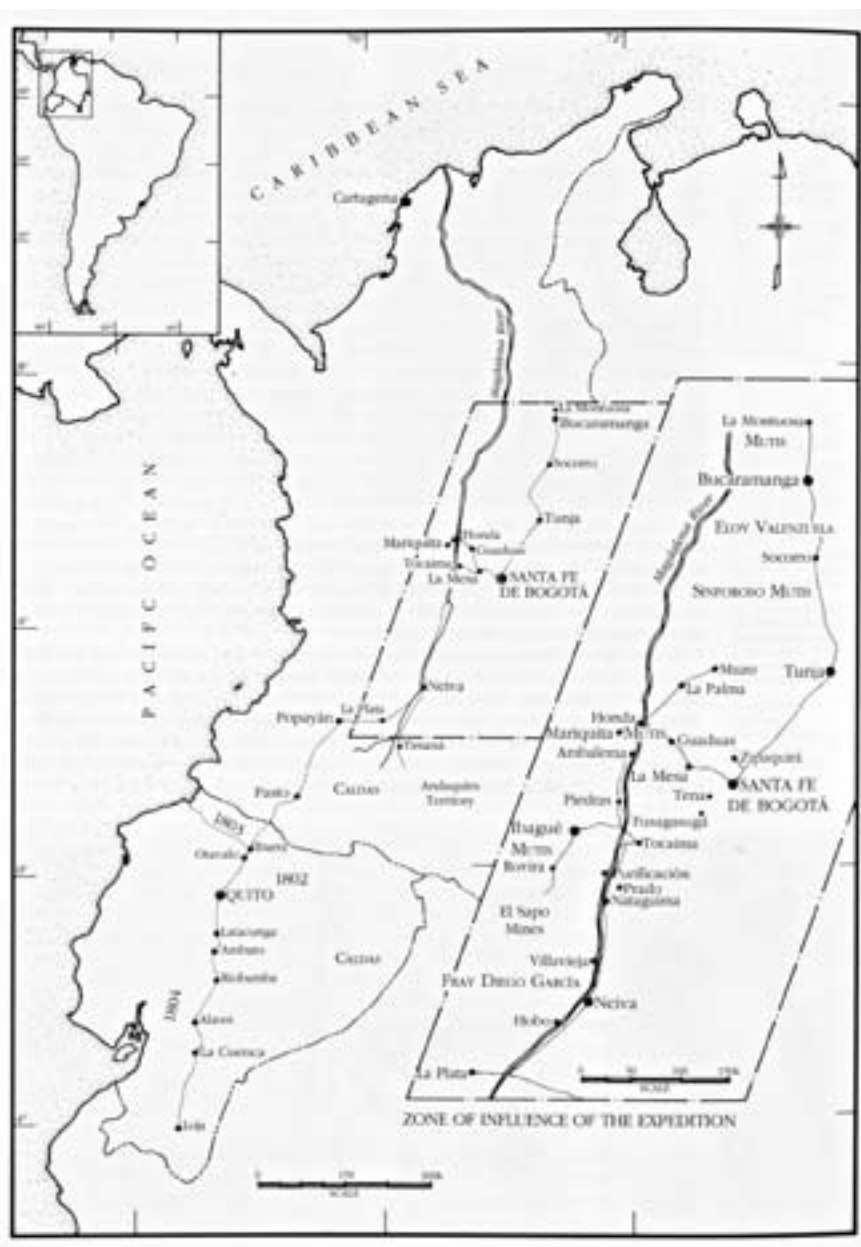
The expedition was unique in having its own drawing school, which trained some of the 30 artists who came and went during the many years of the expedition. The school operated on a strict regime. Specimens were brought in from the field and carefully wrapped in paper, Mutis wrote in his diary: 'everything was arranged the night before, so that the draughtsmen might begin their work early the next day'. The artists began drawing at six in the morning, and worked long hours. The fragile plant specimens had to be painted quickly, and details recorded before they deteriorated. The drawing of each plant was to be as close as possible to the real specimen, in size, outline and colour. Attempts at invention, or experimenting with different styles of painting, were forbidden, resulting in a marked similarity in the watercolour paintings. The works are large-format compositions, and symmetry is used in their geometric layout. They are done in detail with very fine line work, showing even the small hairs on some of the stems. The illustrations in the *Flora Botánica* are very similar in style to watercolour paintings by the French botanical artist Claude Aubriet (1665–1742), showing great clarity of detail and strongly defined forms. Mutis had plans to publish a *Flora Botánica*, and replica ink drawings of plants were made to serve as models for future engravings, but no drawings were actually published at this time.

The artists varied considerably in their temperaments, skill and ability to work. Pablo Antonio García, from Bogotá, was the first artist to be appointed to the expedition, but he suffered from delicate health. Francisco Javier Matis joined the expedition at the age of 20. He was a young man of exceptional drawing talent, who produced the greatest number of signed drawings. Salvador Rizo, like most of the other young artists, had no prior training in botanical drawing. He was hardworking and became the strict director of the drawing school,

demanding a uniform artistic style from his pupils. Later artists were brought in from Quito, skilled both as draughtsmen and in combining light and colour in their paintings. Two academically trained artists from Madrid proved disastrous and produced little work: José Calzado led 'an unruly life that took him to his tomb' and Sebastián Méndez 'proved to be a shirker who caused great conflict with his directors'.

In 1801, Mutis received a visit from the scientist and explorer Alexander von Humboldt, and Aimé Bonpland (an expert botanist), who were undertaking explorations of South America. Humboldt described a challenging journey to Bogotá, following a steep, narrow path up the eastern Cordillera mountains. The track was barely wide enough for a mule, and passed

Unknown cartographer
Botanic Itineraries of the Expedition
reproduced from *Mutis and the Royal Botanical Expedition of the Nuevo Reyno de Granada*, Ma. Pilar de San Pio Aladrén (ed.) (Bogotá: Villegas Editores, 1992)





Salvador Rizo (1783–1817)
Mutisia clematis
 reproduced from *Flora de la Real Expedición Botánica del Nuevo Reyno de Granada* (Madrid: Agencia Española de Cooperación Internacional, 2004)

through woods of nutmeg, walnut and cinchona, before reaching the plateau and Santa Fe de Bogotá. The explorers stayed with Mutis for two months. Humboldt described the botanical library as being second only to that of Sir Joseph Banks in London. At the artists' school, Humboldt particularly admired the work of Francisco Matis.

Ironically, Mutis' encouragement of the academic life of New Granada, including the development of the artists' school, helped to create an intellectual atmosphere that would lead to the independence movement in the Spanish colony. Some students from

the artists' school became involved in the revolutionary cause.

Mutis never returned to Spain, dying in Bogotá in 1808. He has become recognised as an important figure of the Spanish enlightenment, taking this quest for ideas and knowledge from the old world to the new. Although his nephew Sinforoso Mutis carried on with the work of the expedition, civil unrest caused activities to diminish. In 1816, General Pablo Morillo, a military commissioner posted from the Spanish court, ordered the herbarium, botanical paintings and manuscripts (including Mutis' diary) to be sent to Spain, after looting occurred in the house where they had been stored. These items are now housed in the archives of the Royal Botanical Gardens in Madrid.

The scientific study of the herbarium and the eventual publication of the *Flora de la Real Expedición Botánica del Nuevo Reyno de Granada* are both epic stories, involving the passion and dedication of many people. The vast plant collection remained unopened for many years after its arrival in Madrid in 1817. An eminent botanist, Ellesworth Killip, described the good condition of the specimens in 1933. Many of the plants were completely unknown to science and work on describing the species continues to this day.

In 1954, the governments of both Colombia and Spain began jointly publishing the botanical paintings, a venture that has continued over many decades. The result is a fitting finale to the commitment and grand vision of an exceptional man, José Celestino Mutis. The Spanish Embassy's generous gift of a copy of the *Flora Botánica* is an outstanding addition to the Library's collection of illustrated botanical works.

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