The Botanical Illustrations from the Sessé and Mociño Expedition (1787-1803)

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Photos by the author unless noted otherwise.

Authorized in 1786 by king Carlos III, Spain made a botanical expedition in the viceroyalty of New Spain exploring Mexico, the West Indies, northern Central America, Baja and Alta California and Nootka (near Vancouver, Canada) under the command of Martin de Sessé y Lacasta and (from 1790) José Mariano Mociño. The order by the king was to establish a botanical garden and a scientific expedition 'to make drawings, collect the natural products, and illustrate and complete the work of doctor Francisco Hernández' (Rickett, 1947). In the 16th century Hernández was one of the first scientists to visit the new world.

Fig.2 *Tillandsia erubescens* in the open at the Free University hortus, Amsterdam.

Fig.1 *Tillandsia erubescens* (Hunt Institute 6331.0392). '*Phormium* (crossed out) *Tillandsia parasiticum*', '*Epiphloia secundifolia*' is the name in pencil.

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Fig.3 *Hechta podantha* (Hunt Institute 6331.0907). In pencil '*Lochnera bromeliaefolia*' and also '*Phonmix affinis*'.

The expedition was formally 'incorporated' in August 1787, finding and preparing a site for the botanical garden was the first thing to do; later Sessé begun his exploration, starting in the Valley of Mexico.

Sessé (1751–1808), a doctor from Aragon, Spain, living in Mexico, became director of the botanical garden in Mexico City and conceived the idea of the expedition, also acting as the head of it; Mociño (1757–1820), a Mexican-born physician and student of botany of Spanish descent, joined the expedition in 1790 replacing some other member. They returned to Spain in 1803 where Mociño took refuge in Sessé's house. After Sessé's death in 1808 it was Mociño who tried to keep the project of producing a Flora Mexicana alive. This flora however never materialised. But an extensive literature on the Botanical Expedition has been published later, see the list of selected literature.

Fig.4 *Hechta podantha* at Huntington Botanical Garden, San Marino, California. Grown from seed received from B.G. Berlin-Dahlem in 1980, from a collection made in Puebla, Mexico. Photo by Mike Wisnev.

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Fig.5 Flowers of *Hechta podantha* in cultivation. Photo by Andy Siekkinen.

Collections were made in the field of botany and zoology, resulting in a herbarium and a large number of illustrations executed by a number of artists.

Part of the collection of these drawings is now known as the Torner Collection of Sessé and Mociño Biological Illustrations. It comprises 1989 watercolor drawings and sketches; about 1800 are of botanical subjects and the remainder are of various animal species. In 1981 this collection was purchased by the Hunt Foundation and in 1998 a CD-ROM was produced with the drawings (White et al., 1998). Rogers McVaugh (1909–2009), authority on the Sessé and Mociño expedition, wrote the historical introduction; this CD is no longer available but the contents can be viewed now on the website of the Hunt Institute for Botanical Documentation (HIBD).

Fig.6 *Tillandsia ionantha* (Hunt Institute 6331.1149). '*Phormium purpureum*' and '*Tillandsia recurvata*' all crossed out, '*Epiphloia recurvifolia*' in pencil.

Fig.7 *Tillandsia ionantha,* an original duplicate from the expedition (CJBVG vol.13, nr.1255, 1817, 45,6x30,9 cm) in '*Flore des Dames de Genève*'. The other 5 bromeliads in this collection, all in vol.13, are duplicates made in Geneva for de Candolle. '*Tillandsia recurvata*' crossed out, '*Tillandsia ? recurvifolia*' in pencil.

Fig.9 *Catopsis* sp. cf. *morreniana* (Hunt Institute 6331.1713). '*Tillandsia marantaeflora*' in pencil.

Fig.8 *Tillandsia ionantha* in the Mexican sun.

Fig.10 *Catopsis nutans*, from the La Mosquitia region in Honduras. Rarely this species has white flowers. Photo by Piet van Beest.

Almost all of the drawings were made between 1787 and 1799, during a series of long 'excursiones' as they were called; they arrived in Madrid in 1803. In the wake of the retreating army of Napoleon in 1812 they were transferred to Montpellier in France; here and later in Geneva they were studied by Swiss botanist Augustin Pyramus de Candolle from 1813 to 1817. He found the il-lustrations more useful than the descriptions made by Sessé and Mociño. De Candolle also resided in Montpellier at the time when Mociño arrived there from Madrid; Mociño had been working under the French occupation regime (1808-1813) in Spain.

Fig.11 *Catopsis morreniana* with the normal white flowers and upright inflorescence. Photo by Eric Gouda.

De Candolle returned to Geneva in 1816 and, with the permission of Mociño, took with him the drawings. Previously the collection had been with him in Montpellier for more than three years (where a number of drawings were copied in the botanical garden) and he continued to publish new species based on the drawings.

Fig.12 *Tillandsia leiboldiana* Hunt Institute 6331.0557).

Fig.14 *Tillandsia leiboldiana* in cultivation.

Fig.13 *Bromelia pinguin* (Hunt Institute 6331.1452).

Fig.15 *Bromelia pinguin* in habitat.

In 1817 Mociño thought it safe to return to Spain and got permission for it. He asked de Candolle for the return of the drawings which had been in Geneva for about eight months.

As a gift Mociño presented 308 duplicates to de Candolle ('original duplicates'); it was customary that the painters made extra copies for the sake of distribution. But he wanted all the originals back because they were legally the property of the king of Spain.

De Candolle then had more than 1000 botanical drawings being copied ('duplicates') in ten days; the drawings were made by pupils of a drawing school, the coloring done by more than one hundred people, with many women among them, under the supervision of some professionals.

After that de Candolle went at once to Montpellier to return the original collection to Mociño, who later took them to Barcelona, where he died in 1820, alone and impoverished. The original drawings disappeared from public view but were deposited later in a private library. Not until 1979 the owners of the library, the Torner brothers of Barcelona, realised the scientific value of the drawings which eventually were acquired by the Hunt Institute in 1981.

The Torner collection contains the majority of the botanical drawings (ca. 1800), but there are also 119 of them remaining in the Real Jardín Botánico in Madrid. The numbers at Geneva, given by the library of the Conservatoire et Jardins Botanique de la Ville de Genève, are 308 original duplicates and 1036 copies made for de Candolle. To this can be added 193 line drawings compiled on 40 pages made in Montpellier by Toussaint-François Node-Véran. They are bound in 13 volumes titled 'Flore du Mexique', also known as 'Flore des Dames de Genève'. This collection is now online (CJBVG, 2019).

The artists for the expedition included Juan de Dios Vicente de la Cerda, Atanasio Echeverría y Godoy, Jose Guio and Pedro Oliver. Most of the drawings in the Torner Collection seem to have been made by the first two mentioned (White et al., 1998).

A significant proportion has been only partially colored, maybe it was difficult to keep up with the collections made in the field. But this could also be done deliberately as they were meant to be engraved and printed later, having all the information of form and color to complete them. This was something that never happened however.

What was the use of all these images ? It was not only to record what had been seen, more so than descriptions, but also as a tool for classification. Additional uses were for gifts to influential people to solicit funds, to show the progress made by the expedition, or to flatter a patron.

The large Spanish natural history expeditions (1777-1816) together produced about 12000 images, a visual culture of the Hispanic world (Bleichmar, 2012).

List of illustrations of bromeliads in the Torner collection

According to the accession number in the Hunt Institute Art's Department database of botanical illustrations; the 6 illustrations from Geneva (CJBVG) numbered 1252-1257 are duplicates.

The two 'Phormiums' are the only ones that have the name in paint on the drawing; all have a name in pencil, added later by de Candolle or others in the 19th century. The ones marked * illustrate only a detail of the plant; + indicates an original duplicate. The size of the illustrations is 23,5x34,5 cm. It should be noted that these old drawings are not always accurate enough for identification purposes.

Hunt Inst.	Name on drawing	Current name	Geneva
6331.0093	*Tillandsia usneoides*	*Tillandsia usneoides*	
6331.0163*	*Tillandsia longiflora*	*Pseudalcantarea viridiflora*	
6331.0392	*Phormium parasiticum*	*Tillandsia erubescens*	1254
6331.0557	*Tillandsia bracteosa*	*Tillandsia leiboldiana*	1253
6331.0907	*Lochnera bromeliaefolia*	*Hechta podantha*	
6331.1149	*Phormium purpureum*	*Tillandsia ionantha*	1255+
6331.1452	*Bromelia brachystachya*	*Bromelia pinguin*	1257
6331.1569*	*Bromelia acanga*	*Aechmea lueddemanniana*	
6331.1713	*Tillandsia marantaeflora*	*Catopsis sp.*	1252
6331.1912+	*Tillandsia marantaeflora*	*Catopsis sp.*	
6331.1931	*Tillandsia rupestris*	*Pitcairnia palmeri*	1256
6331.1932	-	*Tillandsia caput-medusae*	
6331.1973	- (sketch)	*Pitcairnia imbricata ?*	

More information on some of the names and related herbarium material can be found in an online guide (McVaugh, 2000). The introduction to this guide records in detail the numbering and history of the icons.

The current names are retrieved from Gouda et al. (2018).

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