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# Charles Plumier, un naturalista prelinneano. † 1704 El Puerto de Santa María

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CHARLES PLUMIER, A PRELINNEAN NATURALIST  
† 1704 El Puerto de Santa María

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## **ABSTRACT**

**The French botanist Fr. Charles Plumier (1646-1704) and his books on the XVII Century America flora are studied in this contribution. Along a period of 15 years and through three expeditions (1689, 1693 and 1695), his work as a “novator” descriptor has resulted into 4300 drawings depicting plants and 200 on other natural history objects. He was the discoverer of begonias and fuchsias, and also he developed the technology of metal cutting tools. Paris, Lyon and Amsterdam are the three towns where his books have been published.**

**KEYWORDS:** Botany, America, XVII Century, Metalurgy, France

**Charles Plumier, “botaniste du Roi” Luis XIV of France, died November 20, 1704, aged 58, in El Puerto de Santa María.**

**After the legend Plumier decided he would like to travel the world and get rich. A fortune teller told him: 'Search for a tree that grows near churches and graveyards; its blossoms are the colour of the new moon; its fragrance will overpower your soul; if you uproot it, the leaves and flowers continue to grow. When you find it you shall be rich.'**

**Plumier travelled far and wide until at last he reached the West Indies. He went to an old woman known for her wisdom and described the tree that the fortune-teller had told him about. 'Do you know where such a tree is found?'" he asked the wise woman. The old woman told him that she did indeed know of such a tree.**

**You must go to the church near here, at midnight, on a full-moon night. There you will see a tree spreading its branches along the wall. Shake the branches and you will soon see riches beyond imagining. Plumier did as he was told. He found a small, lovely tree and shook it. Blossoms fell all around him, glistening like golden coins. The fragrance did overcome his soul, and he suddenly realized what real riches were: the calm beauty of the night, the sweet scent of the flowers, the peace of the churchyard. He stopped looking for material wealth and instead continued to look for wealth in nature, discovering many plants. (1)**

**Tournefort (1656-1708), to honor Plumier, named plumeria a genus of the family Apocynaceae, composed of these trees and shrubs native to America, and Asia (Thailand) (2).**

**Father Plumier, who died with Spanish Nationality (3), was the discoverer of the begonias (named in honor of Michel Begon (1638-1710), a jurisconsult, collector and botanist born in Blois and dead in in Rochefort, intendent of The Havre and Marseilles, intendent of marine in Rochefort and Toulon, governor of Santo Domingo, and who had introduced Plumier to Louis XIV) and of the fuchsias (in 1703, after Leonhardt Fuchs, he named the plant that we know as Fuchsia triphylla, in his book Nova plantarum Americarum) in Santo Domingo (4).**

On 1646, 20 April, was born Charles Plumier at Marseilles. There is no information on the economic status of his family, although his father was a craftsman silk lathe turner. He will learn from him the office. And he will be an excellent turner and constructor of scientific instruments, and he would write one of the two great works on the art and science of turning in France along the XVIIIth Century (5).

At the age of sixteen (in 1662) he entered the Order of Mínims. He will dedied his life to the study of mathematics, physics, and drawing. And his life means will be associated along this first phase, to the catholic church patronage.

Once sent to Rome, to the French monastery of the Trinitá dei Monti, Plumier attended the botany course of Claude Sergeant, Mínim like himself, and to the one by the roman medical doctor Onophriis (6). With great jealous care and influenced by the conversations with the Cistercians botanist, Paolo Silvio Boccone (1633-1714), he abandoned mathematics (that until this moment was his dedication) for botany.

Called to Provence, he lived in the monastery at Bormes, near Hyeres. He obtained pevisit the coasts of Languedoc and Provence. Then he has met Joseph Pitton de Tournefort (1656-1708) and Pierre Garidel (1658-1737).

Overall, Tournefort carefully distinguished, the description act from naming. His aim was “to reduce each species to its true genera”. The name that it would receive only should evocate its descriptive expressive characteristics. Plumier, inside that school, frequently links a botanist’s name, Plukenet (1642-1706), or a medical doctor’s name Bartommeo Maranto (born in Venosa and dead in Melfi at the end of XVIth century, the botanists’ oracule after Haller (1708-1777)), with the name of a genera *Plukenetia*, or *Maranta*.

Plumier accompanied Tournefort, until 1689, in his herborizations, botanical excursions through Spain, the islands of the Languedoc and the Provence, the Alps, the Pyrenees, the Midi. He collects a great quantity of plant, which in its majority he draws and he propose himself to compile a new *Pinax*. In the mood of the binary nomenclature by Jean Gaspard Bauhin (1560-1624) (who was also a prelinnean and catalogued 6000 species of plants, in 1623), ie by distinguishing the genera and the species, and whom he would fully acknowledge by assigning the name of naming *Bauhinia* to a tropical trees family.

Tournefort entered the Académie des Sciences in 1691, and the same year in which he published his *Schola botanica* (1689), Plumier was offered by the intendant of the galleys at Marseilles, Bégon, and through the Marseilles medical doctor Joseph Donat Surian (the author of diverses ‘Catalogues des drogues et médicamens des Indes’, published in 1695, 1698 and 1709, and included in the works by Nicolas Lemery ( 1645-1715) and Pierre Pomet) the order of the king to a naturalist who it wished to visit the French possessions in the Antilles and to

**pick up there adequate objects for the natural history. Plumier, bright and without interest in going to the court and playing tribute and homage, as he was unable to stay close to the Pyrenean, he preferred to go out from France.**

**Thus, in 1689 they leave together. Surian collected plants because of their medical applications and because of the chemicals analysis. Plumier's collection aim was the natural history of plants.**

**The dominican missionary Jean Baptiste Labat (1664-1738), mathematician and naturalist ("Nouveau Voyage aux isles Françaises de l'Amérique", Paris, 1722) (5), who Plumier frequently met along his three travels along his stays in the Martinique (a French island from 1635), said that after 18 months they disputed and separate themselves ..**

**This second phase (1689-1704) of F. Charles Plumier activity includes three scientific expeditions in 1689, 1693 and in 1695, to the islands and to South America (Brazil). When he returned from the first, Hans Sloane (1660-1753), the future Royal Society president, as he was the successor of Newton (1642-1727), and then the Governor of Jamaica (an English island from 1655) personal medical doctor, knew his results. The king rewarded him with a pension from the Cour and with the title of botaniste du Roi.**

**His work as a novator descriptor, along these 15 years, resulted in more than 4300 drawings of plants and more than 200 of other natural history objects. He represented the flora and fauna of the islands, sometimes also its inhabitants. His reports and drawings will be used into diverse articles and plates of the *Encyclopédie* consagrated to the natural history (7) .**

**Mostly Santo Domingo, the Martinique, Guadalupe, Central America (along his tirad travel), will imply whom Georges Cuvier (1769-1832) refers as "perhaps the most industrious researcher of the nature" and upon whom Albert von Haller (1708-1777, (Bibliotheca botanica, Zurich, 1772)) said "a man born to extent the knowledge on botany" ("vir ad incrementum rei herbariae natus").**

**In 1704, his fourth travel, carried a decisive pharmacological purpose. To discover and to draw, alter an order by Gui Crescent Fagon (1638-1718, the king's medical doctor and author of "Nouvelles réflexions pour servir utilement du quinquina" (1705)), the tree that produces the quinine.**

**As he preferred El Puerto for his embarkment, he died here, probably because of a pleurisy's attack.**

5 scientific works published in France, there being alive, in botanics and natural sciences and on scientific instrumentation, written in Latin and in French. Great dimensions (in-folio) but also in-4°. 22 manuscripts (holdings of the *Jardin des Plantes* and the *Bibliothèque Nationale* (cabinet des estampes)) in the same disciplines and languages. The book on the precision instruments production, one of the last handcrafted on the base of the use of screws and between the firsts on iron cutting with the lathe, was translated into Russian. Also Plumier has written in the *Journal des Sçavans* and in the *Mémoire de Trévoux* (*Mémoires pour servir à l'histoire des sciences et des beaux arts*).

These are the sole evidences on the activities of Plumier (a very misterious man who experimented difficulties in communicating his discoveries, after Father Labat) in the study of life nature. Effectively, the creator of 106 new genera of plants lost his herbal, and all his objects of natural history in a shipwreck.

Antoine de Jussieu (1686-1758), Boërhaave (1668-1738), Jean Burmann (1707-1780), took part in the posthumous publication of his manuscripts and drawings. Joseph Banks (1743-1820), Marcus Eleazer Bloch (1723-1799), the Fr. Féuillee (1660-1732, also Minim, who determined the meridian longitude of the Hierro Island) and Martin Lister (1639-1712) all four have todo with Plumier's publications when he was still alive.

1°. His first work was:

*Description des plantes de l'Amérique, avec leurs figures,*  
par le R. P. Charles Plumier (Paris, Impr. Royale, 1693).

1 vol. in-fol., 108 plates.

(see: <http://gallica.bnf.fr/ark:/12148/bpt6k96921q/f2.table>)

With the protection of the Marquis de Seignelay (1651-1700) and of Paul Phelypeaux Pontchartrain (1643-1727), this first work was print and its drawings were engraved at the charge of the government. It is divided into three parts: the first one on the ferns; the second one on the arum, the dracontium, the saururus; the third, on the climbing plants, between which he outlines eleven maypops. This publication obtained a great echo and it presents in French very detailed descriptions, and overall its drawings are outstanding, most part of them in simple single line and others partly finished. It is the result of the first travel.

2°. *Nova plantarum Americanarum genera Catalogus plantarum americanarum, quarum genera in Institutionibus rei herbariae jam nota sunt, quasque P. Carolus Plumier ... descripsit & delineavit in insulis americanis* (Paris, 1703).  
1vol. in-4°.

(see: <http://gallica.bnf.fr/ark:/12148/bpt6k96578k>)

It is about one hundred and six new genera of plants from America, to which he associates around seven hundred species, by exposing the characteristics of its flower and fruit. It lists the results of the second travel. Forty plates accompany the descriptions with analytical details, as exact as permitted by this

time's science. By following the tradition of the *Institutiones rei herbariae*, by Tournefort, Plumier decisively contributes to distinguish the act of describing from the act of naming. He excludes from the genera nomenclature the meaningful words. Mostly they will be new and they will receive names derived from the county (thus the *Bromelia Caraguata y Karatas*, in indigenous language, Plumier said : "*Caraguata nomen est Americanarum*", and also: "*Karatas est nomen Americanarum apud Insulas Vulgare*"), and from famous men (botanists, mostly). Published by Jean Boudot (ca. 1631-1706), the editor of the *Histoire royale des Sciences*.

3°. *Traité des fougères de l'Amérique* (Paris, 1705). 1vol. in-fol.

The author left this piece of work ready to be printed in Latin and in French, and in parallel columns. It was composed after the third travel. It contains 172 plates, of which six illustrate lycopods, mushrooms, fucus and zoophytes. All his first work's ferns are showed. The excellent facture and the luxury in the neatness with which he transcribed the whole plant, or one of its branches, with the shadows, the nervatures, the fructification, the hairs, the grudges, comes from that he traces the plants in the nature. In its preface, he confirmed the experiments by Pison (1611-1678) and Cesalpino (1519-1603), referred to the common properties of the congener plants.

4°. *Filicetum americanarum, seu filicum, polypodiorum, adiantorum, etc. ... in America nascentium, icones; auctore P. Car. Plumier* (Paris, 1703). 1vol. in-fol.

With 222 plates, it was compiled alter the previous ones. The botanists that only use illustrations when there is no really available specimen, know this value added from the *Filicetum Americanum*. The case it is with the drawings by Plumier of many tropical plants that already do not exist anymore. Descourtilz (the caiman anatomist, 1775-1836). For instance, after his drawings and herbal were destroyed by a fire in Haiti, used these works by Plumier.

5°. *Plantarum and americanarum and fasciculus and primus (-decimus) continens plantas quas olim Carolus Plumierius ... detexit eruitque atque in insulis Antillis ipse depinxit. Has primum in lucem edidit ... aeneisque tabulis illustravit Joannes Burmannus* (Amsterdam, apud viduam et filium Schouten, 1755-1760). In-fol.

508 drawings were copied in Paris by Claude Aubriet extracted from the manuscripts volumes, that we are to study below, by order of Hermann Boerhaave, and under the direction of Sébastien Vaillant. Hemann Boerhaave (1688-1738) was main lecturer in botanic and medicine from the University of Leiden. Claude Aubriet (1665-1742), was drawer at the 'Jardin du Roi' and illustrator of the Tournefort's 'Voyage du Levant' (1717). Sébastien Vaillant (1669-1722) was another scientist taken under the protection of the medical doctor Fagon, like Plumier himself and Tournefort, and otherwise he was who built the first greenhouse (1714) in France, official lecturer in the Jardin du Roi ("demonstrator of plants"), he established for the first time in France the irrefutable evidence of

the plants' sexuality, at the still existant in the Jardin des Plants "Pistache de Vaillant".

The work was not published in France due to negligence (6). Afterwards, Jean Burmann (1707-1780), medical doctor and professor of Botany at Amsterdam, bought these drawings for a hundred florins. He made engrave the most part, 419, and he published them in-fol, accompanied with descriptions.

Thus nine are the manuscripts by the author at the library of the Jardin des Plantes and that are approached by the *Plantarum americanarum fasciculi*. The first eight comprise more than two hundred drawings of plants with its descriptions. With numerous ferns the volumes three, five, seven and eight are outstanding; in the seventh volume appear sixty one leafs of bindweed, particularly dedicated to four species of palms. In the fifth are the original drawings of the analysis of ninety four genera from the one hundred and six that appear in the *Nova plantarum Americanarum genera*. The ninth volume is a great in-folio dedied to parrots and paradise birds (in twenty seven sheets and including thirty five species). The first transcriptor of these six hundred and ninety five drawings and descriptions was Antoine de Jussieu (1704-1789), who was the responsible of the third posthumous edition of the Tournefort's *Institutiones*.

The *Plantarum americanarum fascicule* appeared, under the care of Johannes Burman, in 10 volumes and in Amsterdam between 1755 and 1760, by showing 262 in-folio plates, accompanied with descriptions.

6°. *L'art de tourner ou de faire en perfection toutes sortes d'ouvrages au tour ... ouvrage très curieux et très nécessaire à ceux qui s'exercent au tour; composé en français et en latin, en faveur des étrangers*  
(Lyon, 1701; 1749).

Composed by 187 pages, with 87 plates. It was written in French and Latin, the first edition contains mistakes that the author, who was not there for the printing of the first edition, had the purpose to correct in a second part; the 1749 reprint remove them. It was translated by the tsar Peter the Great, the manuscript in Russian at St. Petersburg. Silvio A. Bedini and Derek John de Solla Price pointed out that this work was the first time the metal cutting technique with a lathe was described. The iron cutting machine in a lathe was rare at his time, and Plumier mentioned only two other men able to satisfactorily mechanize iron mandrels. Thus it is a model of precise fitness to be applied in measurement instruments.

7°. *Penu botanicum ex omni plantarum genere adstructum.*  
(5 Manuscritos).

5 volumes in-fol. *Michaud* (6) indicates that: "The first contains two hundred and sixty two plant drawings, of which around one hundred and ninety are named and described. The second is composed by two hundred and fifty one drawings without description, some unfinished." Broadly speaking, its quality is the same than those that appear in the *Traité des fougères*". The plants are showed without ordering. The third volume has two hundred thirty seven drawings without description, this volume is less noticeable. The fourth, also, does not offer



but drawings, in a number that may attain the two hundred and fifty, by making use of two hundred and five sheets. At last, the fifth comprises two hundred and one drawings and descriptions in Latin; they include many details on the synonymy. The author includes observations in French. Some drawings are coloured, although few fortunately.

8°. *Area umbelliferarum, seu plantae umbelliferae, quas in horto regio demonstrabat clar. D. Jos. P. Tournefort.*

**After Michaud:**

**Según Michaud:** “Descriptions are not present, and not all the plants are named; but it would be easy to determine them. This is one of the volumes of more precious character. It contains one hundred seventy and nine drawings, of which one hundred thirty two represent complex plants, together with some analysis. Some are of very beautiful execution; the rest does not offer but leaf or fragments.”

9°. *Hortus botanicus ex singulis plantarum generibus, ad leges Institutionum constitutis singulari et vulgatiore specie consitus. Area 1<sup>a</sup>, anno S. 1702; area 2<sup>a</sup>, anno S. 1703-1704.*  
(2 Manuscripts).

**To Michaud:** The first volume meets two hundred forty nine drawings, and the second two hundred fifty one, and includes two hundred fifty one, and includes some zoophytes. Latin descriptions accompany these five hundred drawings, partly very remarkable.

10°. *Botanicum medicum, seu officinalium plantarum usus. - Opus inceptum anno Dni 1700.*

**By following Michaud:** It contains 706 pages and 482 descriptions listed in alphabetical order, generally extracted from Jean Bauhin (1541-1613), Joseph Ray (1628-1705), etc., mostly from Joseph Pitton de Tournefort (1656-1708). Also there is the indication of the virtues of the plants and prescriptions, after Michael Ernst Etmüller (1673-1732 – the pioneer in the introduction of the intravenous injection), etc.

11°. *Botanicum medicum, seu officinalium plantarum usus. - Opus inceptum anno Dni 1700.*

The same title and year than the previous one. **After Michaud:** 506 pages, descriptions in Latin, and 503 drawings, some in colour. Plants from the first volume do appear. These drawings are more little and less good than the precedent ones, in its majority.

12°. *Botanographia Americana.*

**Great in-fol. This volume does not contain but drawings; two hundred forty eight can be counted, between which some are of very great dimensions, and of a very beautiful execution. Several ferns can be examined.**

**13°.** *Descriptiones plantarum ex America.*

**In this volumen, of around 280 pages, are described three hundred and eighty plants. There are more than fifty ferns.**

**14°.** *Botanographia Americana.*  
(1 vol. in-fol. en 3 partes).

**The first part is the text in Latin of the *Description des plantes de l'Amérique*; the second, untitled *Botanicum Americanum*, is the text in French of the same work (Plumier (9) introduced 24 taxons of genera from the Cactaceae family; there are several accepted names of species that could be affected after those initially introduced by Plumier which identity or status requires confirmation); the third, under the title *Botanographia Americana*, presents plants' descriptions.**

**15°.** *De naturalibus Antillarum.*  
(1 vol. in-fol. en 3 partes).

**Volume in-4°, with 94 pages. It includes 142 descriptions in Latin of diverse objects.**

**16°.** *Solum, salum, coelum Americanarum, seu plantarum, piscium, volucrumque insulis Antillis et San Dominicana naturalium icones et descriptiones.*

**This volume contains 92 pages of descriptions and one hundred and sixty drawings of plants, of fishes and of birds. Some are very scarcely drawn, and as a set they are of little interest, wrote *Michaud*. The preface, written in Latin, is very known. In it Plumier speaks on himself, on his care along the travels and on his passion by natural history. His style, like the imitations of the Antiquity authors, approaches his reading patterns and preceptive.**

**17°.** *Poissons, oiseaux, lizards, serpents et insectes.*

**This volume is composed by drawings. One hundred and fifty seven fishes, twenty two birds, a snake, six lizards and some insects are listed. The drawing of diverse fishes is extremely careful, noted *Michaud*. The other objects are not represented but with several traits.**

**18°.** *Poissons d'Amérique.*

**1 vol. It keeps more than one hundred illuminated fishes. With many anatomical details, some snakes and insects. also there is a drawing that represent the garganey.**

**19°.** *Conchylia Americana.*

**This volume offers two hundred ninety and one shells; in great part coloured and drawn, like the fishes from the entry 17°, with the greatest care.**

**20°. *Ornithographia Americana, quadrupedia et volatilia continens .***

**The descriptions, in Latin and in French, are accompanied by ninety and six sheets, that represent three cuadrupeds and one hundred and five birds, mostly coloured. Not all the objects are described. Nevertheless many anatomical details can be found: those that take as its object the *onocrotalus leucophaeus* do occupy nine pages of drawings.**

**21°. *Oiseaux.***

**92 sheets, of which 9 are but details. They include a bat and two Scolopendra. Not all the objects have a name. There are few coloured drawings; only with annotations in French to help in colouring.**

**22°. *Tétrapodes .***

**85 sheets, that comprise snakes, lizards, crabs, eleven species of turtles and a great quantity of details, accompanied by descriptions.**

**23°. *Poissons et coquilles.***

**116 sheets. An elephant can be seen, diverse merged compositions, some eighty fishes and one hundred thirty shells, with some notes in French.**



Joseph Banks (1743-1820): his catalogue contains the announcement of three hundred and twelve drawings of plants and of some objects, bought when the Comte de Bute (1713-1792) sold.

Marcus Eleazer Bloch (1723-1799): in the preface of his *Ichtyologie*, he has spoken on a manuscript by Plumier that he would bought in Berlin, in an auction. It is untitled: *Zoographia Americana pisces et volatilia continens*, 169 pages in-fol. with drawings, whose amount does not indicate. He praises so much these drawings, that he arrives to count only with them the number of rays of the fishes, thus securing each one characterization after the Linneaus system (1707-1778). Bloch utilized enough drawings, and he cites many others, as he makes with the descriptions. In the same volume he presents crabs, marine plants, turtles, frogs, etc. He consecrates thirty five sheets to anatomical details. He claims for its publication overall in what concerns the anatomy of the animals.

P. Féuillee (1660-1732): He does not cite him, but takes in lend several objects, in its *Description des plantes médicinales de l'Amérique*.

Joseph d'Agoty Gautier (1718-1785): he cites him several times into his *Journal de physique*, and offers, between others (in the year 1775, 15<sup>th</sup> part), two curious memories on the anatomy and the measures of the crocodile (*Réponse du P.Plumier à diverses questions d'un curieux sur le crocodile, sur le colibri et sur la tortue* (Paris, 1704)). Bad copied and coloured figures, they could deformate the image of Plumier's talent.


Martin Lister (1639-1712): In his *Journey to Paris* it exist a very interesting pasaje on Fr Plumier, it cites many of his discoveries and drawings. Between others the America's scolopendra of half meter of length, that *Lister* adds to his own work. Plumier (in 1698), said to him that he had counted whereupon to publish ten volumes as considerable as those he had already published (ie, the *Description des plantes de l'Amérique*). That he had not obtained the permission from the *Imprimerie Royale*, and that he was waiting for it in a short delay, etc. do explain *Michaud*.

Jean-Baptiste Labat (1663-1738): In his *Nouveau voyage aux isles de l'Amérique* (Paris : G. Cavelier, 1722), volume 1<sup>o</sup>, he cites Plumier on his method to extract the indigo (anil), page 287. Also in the volume 4<sup>o</sup> (Paris : G. Cavelier, 1722), there is a mention that refers to the assumed identification of a liana apparently able to drive away the snakes, as well as the assumed discovery of the purple.

Charles Plumier, has written in the *Journal des Sçavans*, in 1694, and in *Mémoire de Trévoux*, in 1702 and 1703. The three dissertations offer the detailed description of the cochineal, discovered by the author in the Martinique. He proved that it waas an insect. The first, is untitled "*Réponse du Père Plumier à M. Pommet, marchand droguiste à Paris, sur la cochenille*", in 1694 and inside the *Journal*; the two other, "*Réponse du P.C. Plumier à une lettre de Mr. Baulot écrite de la*

*Rochelle*”, in 1702 November, p.112, and “*Lettre sur une espèce de moucheron bleu observé dans le montagne de Lure, Lettre (2de) sur la cochenille*”, by 1703 September, both inside *Mémoire de Trévoux*.

It can be considered that he addressed this last letter as an answer to the German medical doctor Christian Frédéric Richter (1676-1711), author of the “*Dissertatio de cochinnella*” (Leipzig, 1701). And that the former had at its destiny Isaac Baulot (1657-1712), a prominent alchemist, author of the “*Mutus liber*” (La Rochelle, 1677). This letter to Baulot includes a detailed description of the great sea turtle organ of hearing. The mountain of Lure, where he performed his observations related in 1703, is a summit of 1827 m, to the North of Saint-Étienne-les-Orgues, in the French Alps. The letter to Fr. Pierre Pomet, is addressed to the coauthor, together with Joseph Donat de Surian (the medical doctor with who he travelled along his first expedition to America), of the *Catalogue des drogues et médicaments des Indes*. (Paris, 1695). Also in *Mémoire de Trévoux*, 1704 January, p. 165, must be oriented the previously mentioned “*Réponse ... sur le Crocodile ...*”.



## Conclusion

The prestigious work by Charles Plumier, the French botanist (1646-1704) who is credited with the discovery and naming of the Fuchsias and the Begonias, that he did find in 1695, in Saint Domingue, is also that of a sole man. Along fifteen years (1689-1704) he produced 6000 drawings. More than a half are unpublished; twenty three manuscripts and only six published books.

Faced the *Imprimerie Royale*, worn away by three American expeditions, he embarked in Spain for his last project. He was bright and misterious, his biographer (“Annotations to the Works of M. Plumier”, Paris, 1694) when he was still alive, was but Isaac Baulot (1657-1712), the alchemist authoring the “*Mutus liber (Mute Book)*”.

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M<sup>a</sup> Pilar de San Pío Aladrén, Real Jardín Botánico, Madrid.

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