ResearchGate

See discussions, stats, and author profiles for this publication at: https://www.researchgate.net/publication/290391397

Early scientific illustrations of the Macaronesian flora: An introduction to pre-19th century artworks

Article · December 2015

READS

163

8 authors, including:



Maria Cristina Duarte Faculty of Sciences, University...

36 PUBLICATIONS 117 CITATIONS

SEE PROFILE



Maria M. Romeiras University of Lisbon 26 PUBLICATIONS 132 CITATIONS

SEE PROFILE

Available from: Javier Francisco-Ortega Retrieved on: 11 May 2016 Vol. 43 219-308

Early scientific illustrations of the Macaronesian flora: An introduction to pre-19th century artworks

JAVIER FRANCISCO-ORTEGA^{1,2,11}, ARNOLDO SANTOS-GUERRA³, LAZARO SÁNCHEZ-PINTO⁴, MARIA CRISTINA DUARTE⁵, GERMINAL ROUHAN⁶, EUGENIO SANTIAGO-VALENTÍN⁷, MARK CARINE⁸ & MARIA M. ROMEIRAS^{5,9,10}

¹ International Center for Tropical Botany, Latin American and Caribbean Center, and Department of Biological Sciences Florida International University, Miami, Florida, USA ² Kushlan Tropical Science Institute, Fairchild Tropical Botanic Garden Coral Gables, Florida, USA ³ Calle Guaidil 16, Urbanización Tamarco, Tegueste, Tenerife, Spain ⁴ Museo de la Naturaleza y el Hombre, Santa Cruz de Tenerife, Spain ⁵ Centre for Ecology, Evolution and Environmental Changes Faculdade de Ciências, Universidade de Lisboa Campo Grande, Lisboa, Portugal ⁶ Muséum National d'Histoire Naturelle, Sorbonne Universités Institut de Systématique, Evolution Biodiversité UMR 7205 CNRS, MNHN, UPMC, EPHE - Herbier national, Paris, France ⁷ Departamento de Biología, Universidad de Puerto Rico San Juan, Puerto Rico, USA ⁸ Plants Division, Department of Life Sciences Natural History Museum, London, United Kingdom ⁹ Biosystems and Integrative Sciences Institute (BioISI), Faculdade de Ciências Universidade de Lisboa, Lisboa, Portugal ¹⁰ Authors for correspondence (ortegaj@fiu.edu or mromeiras@yahoo.co.uk)

FRANCISCO-ORTEGA, J., A. SANTOS-GUERRA, L. SÁNCHEZ-PINTO, M. C. DUARTE, G. ROUHAN, E. SANTIAGO-VALENTÍN, M. CARINE & M. M. ROMEIRAS (2015). Early scientific illustrations of the Macaronesian flora: An introduction to pre-19th century artworks. *VIERAEA* 43: 219-308.

ABSTRACT: The natural history of the Macaronesian Islands has attracted the attention of European naturalists for a long time, as the islands harbour a unique flora and fauna not found in the mainland. As a result, Macaronesian organisms were commonly depicted in scientific illustrations of the day. We present a preliminary catalogue of botanical illustrations that were produced before the 19th century. We found paintings, engravings, and woodcuts for 182 taxa from these Atlantic Islands. Ninety-nine of them are endemics in at least one Macaronesian archipelago, 13 for cultivated species, and 70 for nonnative or non-endemic organisms. We recognized three groups of illustrations. The first group (51 taxa) is composed of illustrations made before 1753, the year when Carolus Linnaeus published his seminal work Species Plantarum. The second group (60 taxa) includes engravings that were published between 1754 and 1799. The last group (111 taxa) comprises those paintings and engravings that were the direct result of plant exploration that took place between 1687 (Sir Hans Sloane to Madeira from Britain) to 1797 (Captain Nicolas Baudin, with André-Pierre Ledru as one of the botanists and Antonio González as the scientific artist, to Tenerife from France). The famous plant collector from Kew Gardens, Francis Masson, also produced watercolours during his visit to Macaronesia between 1776 and 1779. The first group does not include any botanical illustration for Azores, and only one species from the Cape Verde Islands was depicted. The rest of species of this group are from the Canaries and Madeira. The second group is also dominated by Canarian and Madeiran plants and has only three species from Azores and one from the Cape Verde Islands. Illustrations that were part of plant exploration endeavors primarily yielded artwork for the Canaries and Madeira. The third group did not have any illustration from the Azores, but George Forster (scientific illustrator and one of the naturalists in the second voyage of Captain James Cook, from Britain) painted watercolours for 11 Cape Verde taxa. A total of 296 scientific illustrations of Macaronesian plants were produced before the 19th century. This total excludes copies of three of the original illustrations for Dracaena draco (one woodcut and one engraving) and Rumex lunaria (one woodcut), and multiple sets of original watercolours made by G. Forster, A. González, or F. Masson.

Key Words: Botanical history, oceanic islands, Atlantic Ocean, plant exploration, botanical illustration.

RESUMEN: La historia natural de las islas de la Macaronesia ha atraído la atención de los naturalistas europeos desde hace varios siglos, ya que albergan una flora y fauna únicas que no se encuentran en los continentes adyacentes. Esto ha dado lugar a que muchas especies macaronésicas hayan sido frecuentemente representadas en ilustraciones científicas. En este artículo presentamos un catálogo preliminar de ilustraciones botánicas realizadas antes del siglo XIX, que incluyen acuarelas, dibujos y grabados de 182 taxones vegetales de estas islas atlánticas. Noventa y nueve de ellos son endémicos de al menos un archipiélago macaronésico, 13 lo son de especies cultivadas, y 70 corresponden a especies introducidas o nativas no endémicas. En nuestro trabajo se reconocen tres grupos de ilustraciones: el primero (51 taxones) lo componen aquellas realizadas antes de 1753, año en que Carlos Linneo publicó su trabajo más importante *Species Plantarum*; el segundo grupo (60 taxones) incluye grabados que fueron publicados entre 1754 y

1799, y el último grupo (111 taxones) lo forman acuarelas, dibujos y grabados que son resultado directo de expediciones de exploración botánica realizadas entre 1687 (el británico Sir Hans Sloane en Madeira) y 1797 (el francés André-Pierre Ledru en Tenerife). El famoso botánico de campo y explorador Francis Masson tambien realizó acuarelas durante su recorrido por los archipiélagos macaronésicos entre 1776y 1779. La mayor parte de las ilustraciones ligadas a estos viajes corresponde a plantas de Canarias y Madeira. En el primer grupo, por ejemplo, no hay ninguna ilustración botánica de Azores y solo incluye una especie de las islas de Cabo Verde, mientras que el resto son de Canarias y Madeira. En el segundo grupo también destacan las especies de estos dos archipiélagos, y solo aparecen tres especies de Azores y una de las islas de Cabo Verde. El tercer grupo tampoco incluye especies de las Azores, pero sí 11 acuarelas de Cabo Verde, realizadas por el británico George Forster, naturalista e ilustrador científico en el segundo viaje del Capitán James Cook. Nuestro catálogo consta de un total de 296 ilustraciones científicas de plantas macaronésicas producidas antes del siglo XIX. Esta cifra excluye copias para tres de ilustraciones originales de Dracaena draco (dos grabados) y de Rumex lunaria (un grabado), así como copias adicionales de las acuarelas originales de George Forster, Antonio González y Francis Masson.

Palabras Claves: Historia de la botánica, islas oceánicas, Océano Atlántico, ilustración botánica.

VETTENSKAPER äro ett ljust, som så liter märkes af dem däruti vistas, som det härligen glimmar för dem, som vandra i mörkret. (SCIENCES are a light, which is as little noticed by those that dwell in it, as it gleams splendidly for those that wander in dark-

LINNAEUS [September 25, 1759 in Skuncke (2008)].

INTRODUCTION

ness).

Since 1991 the authors of this contribution have been engaged in several projects pertinent to botanical history of the Macaronesian islands. These studies have focused on plant hunting expeditions (Sánchez-Pinto, 2004; Francisco-Ortega *et al.*, 2008, 2009, 2015; Romeiras *et al.*, 2014), the interpretation of Pre-Linnaean names (Santos-Guerra, 1993; Sequeira *et al.*, 2010), ethnobotany, ornamental and cultivated plants (Francisco-Ortega *et al.*, 1991, 1993, 2012; Hawkes & Francisco-Ortega, 1993; Sánchez-Pinto, 1980-a, 1980-b; Santos-Guerra, 2008), archival documents (Francisco-Ortega & Santos-Guerra, 1999; Francisco-Ortega *et al.*, in press), plant illustrations (Francisco-Ortega *et al.*, 1994; Santos-Guerra, 2009), cataloguing of major herbarium collections (Sánchez-Pinto, 1993; Francisco-Ortega *et al.*, 2009), cataloguing of major herbarium collections (Sánchez-Pinto, 1993; Francisco-Ortega *et al.*, 2009), cataloguing of major herbarium collections (Sánchez-Pinto, 1993; Francisco-Ortega *et al.*, 2009), cataloguing of major herbarium collections (Sánchez-Pinto, 1993; Francisco-Ortega *et al.*, 2009), cataloguing of major herbarium collections (Sánchez-Pinto, 1993; Francisco-Ortega *et al.*, 1994; Santos-Guerra, 2009), cataloguing of major herbarium collections (Sánchez-Pinto, 1993; Francisco-Ortega *et al.*, 1994; Francis

cisco-Ortega *et al.*, 2011; Santos-Guerra *et al.*, 2011), and biographies/contributions of Macaronesian botanists (Santiago-Valentín *et al.*, 2015). During the course of this research we have come across many illustrations depicting plants from the islands (Santos-Guerra, 2009). The 18th and earlier centuries yielded a considerable number of watercolours and engravings of Macaronesian plants, and many of the watercolours are in European natural history museums and remain unpublished. Furthermore, published artworks are found scattered in several works. Collectively, these illustrations represent one of the best sources of evidence concerning the impact of Macaronesia on naturalists from the Enlightenment. Studies conducted by Hernández Bello *et al.* (2012) indicated that zoological and geological studies also resulted in many illustrations pertinent to the natural history of the Canary Islands.

This review considers pre-19th century artworks of Macaronesian plants that were published in natural history accounts or that were the direct result of scientific expeditions; it does not cover drawings or paintings with a strictly artistic aim within the fields of arts and humanities. We classify botanical illustrations from Macaronesia in this period into three main groups. The first, that we term 'pre-Linnaean' encompasses those paintings, woodcuts and engravings that were published before 1753 – i.e. before the publication of *Species Plantarum* (Linnaeus, 1753), the seminal publication providing the basis for modern organismal taxonomy with the establishment of the binomial classification system. Our second category of 'post-Linnaean' illustrations, includes those published between 1754 and 1799. The final category comprises illustrations directly resulting from scientific expeditions that took place in both pre- and post-Linnaean periods.

In this paper we first provide an overview of the illustrations in each of these three categories and then provide a catalogue of the 182 Macaronesian taxa for which we have identified pre-19th century illustrations. We end this contribution with a few concluding remarks on the importance of these artworks within a historical framework given that they were produced in the period during which scientific discovery and reasoning marked a new way of acquiring knowledge, and in which the Age of Enlightenment provided the foundations for the modern sciences.

PRE-LINNAEAN ARTWORK

The first group of Macaronesian botanical illustrations encompasses woodcuts and engravings that were published before 1753. Within this group there is artwork for 51 taxa, and there are no illustrations for the Azores. The endemic legume *Lotus jacobaeus* was the only species from the Cape Verdes that was depicted during this period.

A total of 108 images of Macaronesian plants were published before 1753. Among them, the illustration of *Dracaena draco* issued by Clusius (1601) is a copy of the one previously published by Clusius (1576). In addition, the woodcut of *Rumex lunaria* depicted by Bauhin *et al.* (1651) is a mirror image of the one found in L'Obel's (1576) work. The vast majority of the pre-Linnaean illustrations (46 uncoloured engravings for 43 species) were published by Leonard Plukenet, a British herbalist who was botanist to King William III (Jarvis & Oswald, 2014: 136). Other early illustrations include paintings and engravings

for 15 Macaronesian species that were cultivated in the Botanic Garden of Amsterdam, and that are included in the *Moninckx Atlas* [a full review of the content and scope of this collection of watercolours was provided by Wijnands (1983)]. Based on this *Atlas*, Jan Commelin (1697, 1701) reproduced 12 uncoloured engravings and Caspar Commelin (1706) included one uncoloured engraving for *Lavandula canariensis*.

The earliest illustration for a Macaronesian plant would appear to be a painting on parchment of Aeonium arboreum by the Greek herbalist Pedanius Dioscorides (Fig. 1). It is found in a copy of his famous De Materia Medica that was produced in Turkey in c. 512 and is currently housed in the Österreichische Nationalbibliothek, Vienna. The oldest known Macaronesian plant illustration of the modern era were published by the famous Belgium-born botanists Carolus Clusius (uncoloured woodcuts of four species published in 1576, 1601, and 1605) and Mathias de L'Obel (an uncoloured woodcut for Rumex *lunaria* issued in 1576) and also by the well-known British botanist John Gerard [two uncoloured woodcuts for Aeonium arboreum (issued in 1633) and Dracaena draco (published in 1597)]. The Italian army engineer Leonardo Torriani depicted the first Macaronesian plant from the wild in the late 16th century (between 1584-1592). Torriani visited El Hierro (Canary Islands) under commission from the Spanish Crown (Cioranescu, 1999: 16-19) and subsequently made one watercolour of the famous rain tree or "Garoé" (Ocotea foetens) [see Hernández Gutiérrez (1998) and Barrios García (2010, 2012-b) for a historical review pertinent to the iconography of this legendary tree] (Fig. 2). Torriani's watercolour was not part of a botanical or natural history manuscript since the main focus of his work was to provide an ethnographical and historical overview of the Canaries during the late 16th century. His manuscript is preserved in the University of Coimbra, Portugal [Torriani, 1592; Martín Rodríguez, 1986; see Cioranescu (1999: 27) for details of the publication of Torriani's manuscript].

Uncoloured engravings of Macaronesian plants were also published in the 17th century by botanists from Italy (Tobia Aldini in 1625, for Persea indica that was cultivated in Farnese Gardens, Rome), Switzerland (Jean Bauhin, Johann Cherler, and Dominique Chabrey in 1651, for *Rumex lunaria*), the Netherlands (Abraham Munting in 1696, for *Aeonium* arboreum and Jasminum odoratissimum that were likely cultivated in his family's botanic garden known as the "Paradise of Groningen"), and Britain (Robert Morison in 1699, for Cedronella canariensis and Salvia canariensis). The earliest known coloured engravings were published by the respected German apothecary Basilius Besler (in 1613) for Aeonium arboreum and Jasminum odoratissimum in his Hortus Eystettensis which depicts individuals grown at the gardens of Prince Bishop of Eichstätt in Bavaria, Germany. Uncoloured versions of Besler's engravings were also issued. During 16 years Besler worked tirelessly to produce the drawings of this two volume book, and at least six engravers were involved in this work, the most important being Wolfgang Killian from Germany (Blunt, 1951: 95). Besler's artworks marked a critical transition in the history of scientific illustration, from a period dominated by woodcuts to a new one in which copperplate engravings prevailed (Keeler, 2009: 9).

An additional 20 botanical illustrations, depicting 13 species were issued in the 18th century prior to the publication of Linnaeus' *Species Plantarum* in 1753. All were uncoloured engravings except those published by the Dutch botanist Albertus Seba (for *Persea*)

224 FRANCISCO-ORTEGA et al.

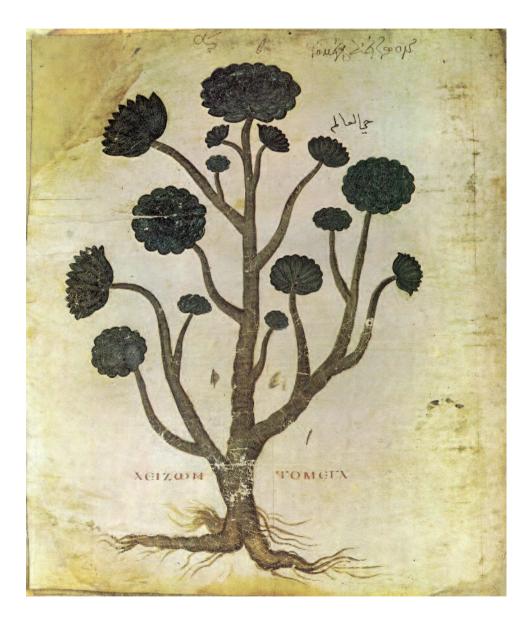


Figure 1.- Painting on parchment of the Canarian endemic *Aeonium arboreum* (L.) Webb & Berthel. (Crassulaceae) by an unknown artist (Dioscorides, c. 512). Image copyright of the Österreichische Nationalbibliothek, Vienna.

indica and Teline canariensis, printed in 1735), by the German apothecary and herbalist Johann Weinmann (for Dracaena draco and Jasminum odoratissimum, published in 1742), and by the British botanical illustrator Elizabeth Blackwell (for two similar copies of a plate of Dracaena draco that were issued between 1737 and 1739 and between 1754 and 1757, respectively). The remaining 14 engravings are found in the works of the German botanist Johann Volckamer (engravings for two species that were published in 1700 and were based on material cultivated in Volckamer's botanic garden in Nuremburg, Germany), the British apothecary James Petiver [illustrations for two species from La Palma (Canary Islands), including one of the lichen Roccella tinctoria that were published in 1709, and depict material sent by the Scottish surgeon James Cuninghame during his trip to China], the French botanist Guillaume Nissole (one illustration of Aizoon canariense published in 1711), the German physician Augustin Walther (three plates for different species that were issued in 1735, and showed individuals cultivated in his garden at Leipzig, Germany), the French priest and physician Jacques Barrelier (two engravings for one species each that were published in 1714, and were based on plants recorded by him in Italy, France, and/or Spain), the German-born Oxford Professor of Botany, Johann Dillenius [depicting three illustrations for different species that were cultivated in James Sherard's Garden at Eltham, England, drawings and engravings were executed by Dillenius (1732)], and Linnaeus [1738, for Canarina canariensis grown in the garden of George Clifford (the Hortus Cliffortianus) at Haarlem, Holland].

a corea er cendenta poi fuori pei rami e per le fogle. Illinio voriae ci in questa goeta gle alcori da quale n vono rimile alle focule, bianche alcuni, er altri neri, er che da bianche si caua l'acqua baena da bece, cr qua amara che l'uno e l'altro i falso, perioche questo albero farca er altri della propria naruna er del ato uno simile alle focule, ce acci, ne bianche, ne da loro si caua acqua ne buona ne amara. Convon è altro che la intorrumbile Affia di che è adorno il dilutranole Parchenio del divino sanalazo l'aquale i ed è duea, nedora, ce odorifora; ha le foglie aeruese er simili à quelle del laveo, ce il fruevo metto gianda, d'unericati cami, giamai n'fronda ne vene à geande altorra. In quese tre gole traiden universe riglie che danno acqua buona però non n'a consideratione se non di questa che i forrine che



Figure 2.- Achromatic watercolour of *Ocotea foetens* (Aiton) Baill. (Lauraceae) from the island of El Hierro found in Torriani's (1592) manuscript. It is likely that the painting was made by Leonardo Torriani. Image courtesy of University of Coimbra.

POST-LINNAEAN ILLUSTRATIONS

The second group of Macaronesian illustrations includes artwork prepared between 1754 and 1799. In total, there are 77 illustrations of which 70 are engravings and seven are watercolours, and they depict 60 taxa. Among then the engraving of Dracaena draco published by Römer (1796) is a copy of the one previously issued by Vandelli (1768). The watercolours were painted by the German botanist Johann Wendland and are in an unpublished manuscript housed at the Gottfried Wilhelm Leibniz Bibliothek - Niedersächsische Landesbibliothek, Germany (Wendland, 1789). They depict plants cultivated in the Herrenhausen Gardens, Hanover, Germany. Most of the remaining illustrations were published by the Dutch born botanist Nikolaus Jacquin in a series of works issued between 1776 and 1798 (22 engravings and 22 species) and by the French taxonomist Charles L'Héritier (20 engravings and 20 species published between 1786 and 1805). We have followed Schubert (1945), Anonymous (1964), Buchheim (1965), and Taxonomic Literature (work published in several volumes in Regnum Vegetabile, a book series of the International Association of Plant Taxonomists) to assign dates to the publications produced by these two authors because some have poorly understood release dates. Three of the plates found in L'Héritier (1805), (i.e., for the legumes Adenocarpus foliolosus, Genista tenera (Fig. 3), and Spartocytisus supranubius) were posthumously published when his library was sold in an auction in 1805 (Buchheim, 1965: 45). Sixteen of the illustrations published by L'Héritier and 13 of those published by Jacquin were based on material collected in Macaronesia by Francis Masson (see below). A further 11 of Jacquin's engravings depict plants that were cultivated in Austrian gardens. All of Jacquin's engravings were coloured. In the case of L'Héritier's work, there are both coloured and uncoloured versions of the engravings for seven of the species depicted, the remaining illustrations are uncoloured. During the late 18th century The Curtis's Botanical Magazine also provided an important avenue for the publication of illustrations of plants from Macaronesian and 12 coloured engravings (12 species) were published in this journal between 1790 and 1799.

Among the 16 remaining post-Linnaean engravings (14 species), the four plates published by the Spanish botanist Antonio Cavanilles (1787, 1788, 1791, and 1795) and the illustration of *Dracaena draco* issued by Domenico Vandelli in 1768, apparently based on one individual cultivated in Portugal, were uncoloured; the remaining illustrations were coloured. Of those, the Italian Giorgio Bonelli published four engravings between 1775 and 1780 of species cultivated in Italian gardens, likely from Roma, whilst the British botanist James Edward Smith, founder of the Linnean Society of London published an engraving of *Ixanthus viscosus* in 1793. In the Netherlands, George Schneevoogt (1793) published a plate of *Clethra arborea* and Maarten Houttuyn (1796) an illustration of *Phalaris canariensis* whilst in Switzerland, Augustin P. De Candolle (1799) published two plates of succulent plants, one of which (*Aichryson* × *aizoides*) was from an individual grown in the gardens of "Cels" (Jacques Martin Cels) in Paris. Finally, within this second group of illustrations, coloured engravings for *Cedronella canariensis* and *Phalaris canariensis* were published by an anonymous author in the 1779 and 1792 volumes of *Plantarum Indigenarum et Exoticarum Icones ad Vivum Coloratae*.

Among the species illustrated in the post-Linnaean period, only three species from the Azores were depicted: *Hypericum foliosum* (by Jacquin in 1798) and *Frangula azorica*



Figure 3.- Coloured engraving of the Madeiran endemic *Genista tenera* (Jacq. ex Murray) Kuntze (Fabaceae). Drawing made by Pierre-Joseph Redouté and engraving executed by Jacquaes Juillet (L'Héritier, 1805). Image courtesy of the Hunt Institute for Botanical Documentation.

and *Pericallis malvifolia* (by L'Héritier in 1790 and 1789, respectively). A watercolour of the Cape Verde endemic *Lotus jacobaeus* was painted by Johann Wendland (see above) and coloured engraving of this species was published in *The Curtis's Botanical Magazine* by William Curtis in 1790 (Fig. 4).

ILLUSTRATIONS RESULTING FROM SCIENTIFIC EXPEDITIONS (1687-1797)

The third and final group of Macaronesian botanical illustrations (111 taxa) includes artworks that were produced during six major pre-Linnaean or post-Linnaean plant exploration expeditions for which Macaronesia was either the main focus or a port of call for voyages towards other regions of the World. The earliest of these visits was performed by the British physician and naturalist Sir Hans Sloane to Madeira en route to Jamaica in September 1687 (Sequeira *et al.*, 2010). Sloane (1707, 1725) published uncoloured engravings for 13 taxa from this island that depict herbarium specimens collected during this visit.

The French naturalist and astronomer Father Louis Feuillée visited the Canary Islands twice (in 1708 and in 1724) (Bourgeois, 1967: 341, 343-344; Puig-Samper & Pelayo, 1997; Herrera-Piqué, 2006-a). During his second trip he stayed in the islands of La Gomera, El Hierro, and Tenerife. Feuillée (1724) wrote an extensive manuscript account of his visit and a facsimile was published by Herrera-Piqué (2006-b). This manuscript, housed at the Natural History Museum of Paris, has unsigned achromatic watercolours for one lichen species (Fig. 5) and 30 taxa of plants. Santos-Guerra (2006-b: 623) suggested that these paintings were made by Feuillée himself, although acknowledging that at least some of the illustrations could have been executed by his assistant Charles Verguin who was a painter.

The British Naval officer Captain James Cook is renowned for his three voyages of exploration around the world. He called at Macaronesian ports during each expedition (Francisco-Ortega et al., 2015). Sir Joseph Banks from Britain and Linnaeus's disciple and Banks' assistant Daniel Solander from Sweden were the botanists on the first voyage which called in Madeira in September 1768. Herbarium specimens were prepared and the British artist Sydney Parkinson (see below) made 22 drawings (22 taxa), 16 of which he finished as watercolours. Parkinson died of dysentery later in the expedition, soon after leaving Batavia, Java in early 1771 (Blunt, 1983). His six remaining drawings of Madeiran plants were eventually watercoloured in England by Thomas Burgis (one painting) and unknown artists (five paintings) (Blunt, 1983). Sydney Parkinson's watercolours made during the first voyage are the earliest known scientific coloured plant paintings made in Madeira. The complete set of copper engravings that were executed from his paintings included plants from Australia, Brazil, Java, Madeira, New Zealand, Society Islands, and Tierra del Fuego. They constitute what is formally known as Banks' Florilegium. They are located in the Botany Library of the Natural History Museum of London and are regarded as one the finest collections of botanical artwork resulting from a scientific expedition.

During his second voyage, Cook stopped in Madeira (late July - early August 1772), the Cape Verdes (August 1772), and the Azores (July 1775). Johann Reinhold Forster and his young son George Forster, both from Germany, joined this second voyage as the main



Figure 4.- Coloured engraving of the Cape Verdean endemic *Lotus jacobaeus* L. (Fabaceae) published by Curtis (1790b). Unknown author. Image courtesy of Fairchild Tropical Botanic Garden.



Figure 5.- Achromatic watercolour of the Canarian natives (non-endemic) *Asplenium hemionitis* L. (Aspleniaceae) (right) and *Roccella* cf. *tinctoria* DC. (Roccellaceae) (left) found in Feuillée's (1724) manuscript. Image copyright of the Natural History Museum of Paris (manuscript number 38).

naturalist and scientific illustrator, respectively and George Forster made watercolours for 21 species (ten in Madeira and 11 in the Cape Verde Islands). He made one extra set or watercolours for two of these paintings. Five of the watercolours were subsequently the basis for uncoloured engravings that were executed by an unknown engraver. The artwork is housed at the Natural History Museum of London, the Komarov Botanical Institute (Russia), and the Gotha Library at Thuringia, Germany. The watercolours from the Cape Verde Islands represent the earliest known botanical scientific illustrations made in the archipelago. Two additional unsigned engravings (apparently of material collected in Macaronesia, see below) were published by Forster & Forster (1775) for *Epibaterium pendulum* (accepted name *Cocculus pendulus*) and the hepatic *Aytonia rupestris* (accepted name *Plagiochasma rupestre*). It appears that these two engravings are the earliest published illustrations associated with post-Linnaean descriptions of new taxa from Macaronesian flora.

The British botanist Francis Masson can be regarded as the most important 18th century plant hunter in Macaronesia (Francisco-Ortega *et al.*, 2010). Appointed by the Royal Botanic Gardens Kew, Masson stayed in the region between 1776 and 1779 visiting Madeira, the Azores, and Canaries. In 1784 he made a second visit to Madeira (Francisco-Ortega *et al.*, 2009: 4). His collections were the basis for species descriptions by Linnaeus the younger, William Aiton, Nikolaus Jacquin, Charles L'Héritier, Leopold von Buch, and Johann H. F. Link (Francisco-Ortega *et al.*, 2008: 395). Francis Masson also had skills as a plant illustrator (Bradlow, 1994: 88-89) and made watercolours of the Madeiran endemics *Clethra arborea* (unknown date) and *Musschia aurea* (in 1784).

A French expedition to the Antilles, led by Captain Nicolas Baudin, also resulted in illustrations of plants from Tenerife. André-Pierre Ledru was one of the botanists on the expedition (Morel, 2007) which visited Tenerife between November 1796 and March 1797. Both herbarium collections and three major written accounts resulted from the visit, with two of the accounts published (Ledru, 1810; Jangoux, 2009). Jangoux's (2009) publication provided a transcription of the travel-log as written by Baudin. The third account, that remains unpublished (Rouhan et al., in preparation), was written in Tenerife by Ledru, and provides a list of plant material that was collected during the visit (Ledru, 1797) (Fig. 6). Both Ledru's manuscript and Baudin's travel-log included unsigned watercolours of plants from Tenerife, and are kept at the Natural History Museum of Paris (Ledru, 1797; Baudin, 1796-1798). We believe that these paintings were made by the Spanish painter Antonio González from Madrid (Jangoux, 2009: 32, 46), who was the official artist for this expedition. There are watercolours for 22 taxa with duplicates in both manuscripts, except for Blechnum spicant, Euphorbia canariensis, Ilex perado, Pelargonium inquinans, Ranunculus cortusifolius, and Sonchus acaulis which are found only in Baudin's travel-log and for Dracaena draco which is included only in Ledru's (1797) manuscript. Baudin's watercolours were reproduced by Herrera Piqué (2006-b) and Jangoux (2009).

Two additional French expeditions appear to be relevant for our research as they included that famous painter Pierre Ozanne. The first was led by Lieutenant Jean-René de Verdun de la Crenne whose ship *La Flore* visited Tenerife for a short period of time between 1771 and 1772 en route to the New World and the North Atlantic (De Uriarte *et al.*, 2000: 134-137). Two boats, *La Boussole* and *L'Espiègle*, commanded by Captain Jean-Charles de Borda undertook the second expedition in 1776 (De Uriarte *et al.*, 2000: 136,

Catalogue, Dresse Saisant La nouvelle Methode De JUSSION., Des plantes Reauillies Dans Sisle De JENeriffe, Depuis de 16 Brumaire dan 4, 6 jusqu'au 16 ventose dan 5, par andré pierre, APM, l'éve en Botanique, dan Des Naturalistes envoyés, par de gauvernement komers, a da Fimité espagnole. Sous de Pirection Du Étoyen Baudin. Capitaine De vaisseau, Chof De Sexpadition. Santa Cuiz De Tenerifie, 18 ventose au 5.

Figure 6.- Cover page of the unpublished 27 page manuscript by André-Pierre Ledru that lists the plant material that he collected in Tenerife during the expedition of Nicolas Baudin (en route to the Antilles) that visited this island between November 1796 and March 1797. Manuscript includes 16 watercolours (likely made by Antonio González) and it was written in Santa Cruz de Tenerife (date 18 Ventose year 5 = March 8, 1797). Image copyright of the Natural History Museum of Paris (manuscript number 2547).

143-149), the target of which was to obtain geographical measurements for Tenerife. During the visit, Ozanne made at least one drawing of a celebrated draco tree located in La Orotava, Tenerife (Barrios García, 2012-a: 751). We have not found additional botanical illustrations by Ozanne from the Canaries, but we cannot rule out that future archival/museum research will reveal that other botanical paintings/drawings were made by him in Tenerife.

Excluding multiple copies/engravings of the same watercolours made by G. Forster, A. González, and F. Masson, our research showed that these botanical expeditions yielded 113 different engravings/watercolours of Macaronesian plants.

A CATALOGUE OF BOTANICAL ILLUSTRATIONS FOR THE MACARONESIAN ISLANDS (c. 1512-1799)

The catalogue of botanical illustrations presented in our study represents an initial inventory for the Macaronesian islands. We are certain that future research will find additional paintings and drawings since during these two centuries the Atlantic islands were a common stopping point for European natural history expeditions aiming to explore the New World, Africa, and Asia and the flora of Macaronesia itself provided European naturalists with an accessible land in which to study an exotic tropical or subtropical flora (Francisco-Ortega *et al.*, 2010). This catalogue demonstrates that Macaronesian plants were cultivated not only in Holland and England [as shown by Francisco-Ortega *et al.* (2012)] but also in other European gardens, in Austria, Italy, Germany, and France.

Previous studies have located and identified the illustrations published/executed by Plukenet (Francisco-Ortega et al., 1994), Sloane (Sequeira et al., 2010), Petiver (Santos-Guerra et al., 2011), Feuillée [by Santos-Guerra in Puig-Samper & Pelayo (1997) and in Herrera Pique (2006-b)], Parkinson (Francisco-Ortega et al., 2015), Masson (Francisco-Ortega et al., 2009), G. Forster (Francisco-Ortega et al., 2015), Baudin and Ledru (by Santos-Guerra in Jangoux, 2009) and The Curtis's Botanical Magazine (Anonymous, 2002). Most of the illustrations found in the works of Plukenet (1692, 1694, 1696) and all of the engravings published by Sloane (1707) have matching specimens in their respective herbaria located in the Sloane Herbarium (Natural History Museum of London). A number of the illustrations made by Forster, during the second voyage of Captain Cook, also correspond to his herbarium collections that are housed at the Natural History Museum of London, the Natural History Museum of Frankfurt, Royal Botanic Gardens Kew, Georg-August University Göttingen, World Museum, Liverpool, and Uppsala University [a review of the collections made by the Forsters can be found in Nicolson & Fosberg (2004)]. Several of the descriptions accompanying the illustrations published by Jacquin (1776, 1781-a, 1781-1787, 1782, 1783, 1784, 1787, 1797-a, 1797-b, 1798) and L'Héritier (1786, 1787-1788, 1788-b, 1790, 1791-a, 1792-a, 1792-b, 1805) refer to specimens collected by Francis Masson in Macaronesia (see above). His specimens are located in the Natural History Museum of London. Our preliminary research also suggests that many of Parkinson's Madeiran watercolours [in Banks et al. (1995)] and those of González [in Ledru (1797) and Baudin (1796-1798)] from Tenerife also have corresponding specimens (Santos-Guerra et al., in preparation), in the Natural History Museum of London, and in the Ledru's herbarium (scattered

within the Jussieu's collection) of the Muséum National d'Histoire Naturelle, Paris (Rouhan et al., in preparation), respectively. Of the remaining illustrations, the vast majority are linked to descriptions or accounts that state that they are based on material from Macaronesia. Those that resulted from scientific expeditions are annotated to indicate that they were prepared in the region. However, the published description for several of the engravings that we have identified as belonging to Aizoon canariense, Bosea yervamora, Jasminum odoratissimum and Persea indica do not have details of their provenance. Until additional research is conducted we have decided to follow previous accounts by Boerhaave (1720) and Linnaeus (1738, 1753) and to assign this artwork to these species. It is worth mentioning however, that illustrations identified by Linnaeus (1753: 7, 225) as belonging to the endemic species *Bosea vervamora* [published by Sloane (1725: 19, Tab. 158, Fig. 3)] and Jasminum azoricum [published by Burman (1736: 128-129; Tab. 59)] do not correspond to those species and instead depict taxa from the West Indies and Asia, respectively, that do not occur in Macaronesia (Lourteig, 1966: 26; Francisco-Ortega et al., in preparation). Morphological differences are also apparent among the images assigned to Aeonium arboreum, and we cannot rule out that some illustrations depicting this species are of other taxa from Macaronesia or Africa (Santos-Guerra, in preparation).

The 182 taxa for which we have documented scientific illustrations (311 engravings, woodcuts, and paintings), belong to 62 families, with Asteraceae (23 taxa), Lamiaceae (17), and Fabaceae (11) being the most well represented. All of the illustrations are of vascular plants except for one species of moss, one brown alga, and two lichens. Among them, 81 taxa are endemic to one archipelago (58 from the Canaries, including one hybrid; 20 from Madeira; two from the Azores; and one from the Cape Verdes), and 18 taxa are endemic to two or more Macaronesian archipelagos. Thirteen of the illustrated species are cultivated and the remainder are either introduced (11), natives (43) or have an uncertain status (i.e. it is not clear whether they are native or introduced taxa) (16). *Dracaena draco* is the species for which there is the greatest number of illustrations (8). Other species that were often depicted include *Aeonium arboreum* (7), *Canarina canariensis* (6), *Cedronella canariensis* (7), and *Teline canariensis* (6).

As a working taxonomy we mostly follow Wiklund (1992), Neto *et al.* (2001), Van den Heede *et al.* (2003), Upson & Andrews (2004), Arechavaleta *et al.* (2005), Acebes Ginovés *et al.* (2010), Sequeira *et al.* (2010-a, 2010-b), He & Zhang (2012), Polatschek (2014), Romeiras *et al.* (2014), Bañares Baudet (2015), and Francisco-Ortega *et al.* (2015). Family placements were assigned according to the recommendations of The Angiosperm Phylogeny Group (2009) and Christenhusz *et al.* (2011). For each of these 182 taxa (here alphabetically sorted by species) we also provide synonyms and list the works, both published and unpublished, where illustrations can be found. Wherever possible we also give details of the artists and engravers responsible. Finally, for each taxon we provide additional notes with information pertinent to its distribution, the origin of depicted material, and bibliographic/historical information regarding the works in which the illustrations are found.

ABUTILON PANNOSUM (G. FORST.) SCHLTDL., Bot. Zeitung (Berlin) 9: 828, $1851 \equiv Sida$ pannosa G. Forst., Commentat. Soc. Regiae Sci. Gott. 9: 62, 1789 (Malvaceae).

George Forster (unknown date, watercolour housed at the Gotha Library, University of Erfurt, Turingia, Germany). Text on watercolour: "*Sida pannosa*."; "G. Forster pinx^t." This taxon was reported for the Cape Verde Islands as *Sida pannosa* by Forster (1789: 62). There are two versions of this watercolour, the second is also housed at the Gotha Library but with the text on watercolour: "*Sida pannosa*."

Note: The two watercolours were made during the second voyage of Captain James Cook. They were based on material collected in the Cape Verde Islands in 1772. *Abutilon pannosum* is a native species of the archipelago.

ACHYRANTHES ASPERA L., Sp. Pl. 1: 204, 1753 (Amaranthaceae).

- Plukenet (1694: **TAB. CCLX, Fig. 2**, unsigned uncoloured engraving). Text in Plukenet (1696: 26): "Amaranthus Siculus spicatus, radice perenni [...] ex Insula Maderensi."
- Feuillée (1724: [plate] **11**, unsigned achromatic watercolour, part of manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 168). Text on painting: "*Amaranthus Siculus Radice Perenni*."

Note: Plukenet's engraving was based on Madeiran material. Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724. This is a non-native species in the Canary Islands.

ADENOCARPUS FOLIOLOSUS (AITON) DC., Fl. Franç. ed. 3. 6: 549, $1815 \equiv Cytisus$ foliolosus Aiton, Hort. Kew. 3: 49, 1789 (Fabaceae).

- Plukenet (1694: **TAB. CCLXXVII, Fig. 6**, unsigned uncoloured engraving). Text in Plukenet (1696: 128; 1700: 63): "*Cytisus Canariensis, microphyllos* [...]."
- Curtis (1798-c: **N. 426**, coloured engraving. Drawing made by S. E. Edwards and engraving executed by F. Sansom). Engraving reproduced by Anonymous (2002: 21). Text in Curtis (1798-c: 426): "*Cytisus foliolosus*. Leafy Cytisus."
- L'Héritier (1805: **XCVI**, engraving. Drawing made by P. J. Redouté and uncoloured engraving executed by P. Maleuvre). There are coloured and uncoloured versions of this engraving (Buchheim 1965: 44). Text in L'Héritier (1791-b: 184): "*Cytisus foliolosus*."

Note: The species is endemic to the Canary Islands where it is found on all islands except in Fuerteventura and Lanzarote. Curtis's engraving was based on material cultivated in England where the species was originally introduced by Masson in 1779 (Curtis, 1798-c: 426).

ADIANTUM RENIFORME L., Sp. Pl. 2: 1094, 1753 (Pteridaceae).

Plukenet (1694: TAB. CCLXXXVII, Fig: 5, uncoloured engraving. Engraving executed by M. Vander Gucht). Reproduction of illustration published by Francisco-Ortega *et al.* (1994: 13). Text in Plukenet (1696: 155, 400; 1700: 82): "*Filix Hemionitis dicta Maderensis pediculis splendentibus* [...]."

Note: This illustration was based on Madeiran material. The species is native to the island.

AEONIUM ARBOREUM (L.) WEBB & BERTHEL., Phytogr. Canar. 1: 185, 1840 ≡ Sempervivum arboreum L., Sp. Pl. 1: 464, 1753 (Crassulaceae).

- Dioscorides (c. 512: [folio] **12 (verso)**, unsigned painting on parchment that is part of a manuscript housed at the Österreichische Nationalbibliothek, Vienna) (Fig. 1).
- Clusius (1601: **lviii**, unsigned uncoloured woodcut). Text on illustration: "Sedum majus legitimum." Text in Clusius (1601: lviii): "[Sedum] legitimum id este Sedum aut Sempervivum majus [...]."
- Besler (1613b: [plate] **354**, unsigned coloured engraving). Claims that all the drawings in this work were made by Besler are controversial (Johnston, 1992: 146). Text on engraving: "*Sedum arborescens*." There are coloured and uncoloured versions of this illustration. Text in Besler (1613b: opp. plate 354): "*Sedum arborescens. majus. Gracum* [...]."
- Gerard (1633: **510**, unsigned uncoloured woodcut). Text on illustration: "Sedum majus arborescens. Tree Houseleeke."
- Munting (1696: **Fig. 129**, **Fol. 468**, unsigned uncoloured engraving). Text on engraving: "Sedum maius arborescens radicabile." Text in Munting (1696: 468): "Het Sedum Majus arborescens [...]."
- Bonelli [1778: T. V, Tab. 11, unsigned coloured engraving. Engraving likely executed by M. Bouchard and likely painted by C. Ubertini, but see Stevenson (1961: 361) regarding authorship of *Hortus Romanus* illustrations]. Text on engraving: "Sedum majus arborescens [...]." Text in Bonelli (1778: 1): "Sedum majus, arborescens [...]."
- Maria Moninckx (unknown date between 1686 and 1706: *Moninckx Atlas*, vol. 7: [plate without number] 43, watercolour housed at the Bibliotheek van de Universiteit van Amsterdam). Text on watercolour: "Maria Moninckx."

Note: Aeonium arboreum is considered as a Canary Island endemic, it is on all islands except Fuerteventura and Lanzarote. The species has been grown since ancient times because of its medicinal and ornamental value. None of the illustrations links this plant explicitly to the Macaronesian islands and it has been argued that the cultivated forms represent tetraploid variants of this species (Bañares Baudet, 2015: 62). The work of Dioscorides (c. 512) found in the Österreichische Nationalbibliothek is also known as Codex Vindobonensis Medicus Graecus 1 and is one of the several copies that were based on the famous pharmacopeia manuscript written by Dioscorides in Rome during the reign of Emperor Nero in the first century A.D. It has been suggested that the copy in Austria was mostly made from the work of Dioscorides, Krateuas (a physician of the first century B.C.) and Galen (a physician and philosopher of the second century A.D.) (Wächter, 1962). Besler's engraving depicts an individual raised at the gardens of the Prince Bishop of Eichstätt in Bavaria, Germany. His work has been called "the massiest of herbals" (Johnston, 1992: 146), and at least six engravers were engaged in producing the 374 plates that compose this two volume work (Blunt 1951: 95). Munting's illustration was likely based on material cultivated in the botanic garden of his family known as the Paradise of Groningen (Keeler, 2009: 31). The plant depicted by Bonelli's in Hortus Romanus came from Italian gardens, very likely from Rome. It seems that Bonelli was only responsible for Volume 1 of Hortus Romanus (year 1772), the rest of the volumes were prepared by N. Martelli (Stevenson, 1961: 360). Material cultivated in the Botanic Garden of Amsterdam was the basis for the watercolour found in the Moninckx Atlas.

AEONIUM CANARIENSE (L.) WEBB & BERTHEL., Hist. Nat. Iles Canaries Phytogr. 1: 196, 1841 SSP. CANARIENSE ≡ Sempervivum canariense L., Sp. Pl. 1: 464, 1753.

- Unknown artist (unknown date between 1686 and 1700: *Moninckx Atlas*, vol. 4: [plates without numbers] 45 & 46, both watercolours housed at the Bibliotheek van de Universiteit van Amsterdam). Watercolour (plate 46) reproduced by Wijnands (1983: plate 33) and Francisco-Ortega *et al.* (2011: 109). Text in the *Moninckx Atlas*: "Sedum Canarinum foliis [...]."
- Commelin (1701: **Fig. 95**, unsigned uncoloured engraving). Text in Commelin (1701: 189): "*Sedum canarinum foliis* [...]."
- Feuillée (1724: [plate] **38**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 307). Text on painting: "*Sedum maximum*."

Note: This taxon is endemic to the Canary Islands (Tenerife). Material cultivated in the Botanic Garden of Amsterdam is depicted in both the *Moninckx Atlas* and Commelin's illustration since one of the paintings from the *Moninckx Atlas* was used to execute Commelin's engraving. Feuillée's painting was made during his voyage to the Canary Islands in 1724.

AEONIUM LINDLEYI WEBB & BERTHEL., Hist. Nat. Iles Canaries Phytogr. 1: 189, 1840 ssp. LINDLEYI.

Feuillée (1724: [plate] **4**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 103). Text on painting: "*Sedum arborescens ramosa minor orbiculatis fere foliis*."

Note: This taxon is endemic to the Canary Islands (Tenerife). Feuillée's painting was made during his voyage to the Canary Islands in 1724.

AEONIUM TABULIFORME (HAW.) WEBB & BERTHEL., Hist. Nat. Iles Canaries Phytogr. 1: 185, 1840, as "tabulaeforme" ≡ Sempervivum tabuliforme Haw., Suppl. Pl. Succ. 69, 1819, as "tabulaeforme".

Plukenet (1694: TAB. CCCXIV, Fig. 1, unsigned uncoloured engraving). Reproduction of engraving published by Francisco-Ortega & Santos-Guerra (1999: 260). Text in Plukenet (1696: 340; 1700: 169): "Sedum majus Canarinum [...]."

Note: Endemic to Tenerife.

AEONIUM URBICUM (C. SM. EX HORNEM.) WEBB & BERTHEL., Hist. Nat. Iles Canaries Phytogr. 1: 194, 1841. ≡ Sempervivum urbicum C. Sm. ex Hornem., Hort. Bot. Hafn. Suppl.: 60, 1819.

Feuillée (1724: [plate] **10**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 146). Text on painting: "*Sedum majus arborescens Teneriferum caule oblongo*."

Note: The species is endemic to Tenerife, and Feuillée's painting was made during his voyage to the Canary Islands in 1724.

AERVA PERSICA (BURM. F.) MERR., Philipp. J. Sci. 19: 348, $1921 \equiv Iresine \ persica$ Burm. f., Fl. Indica: 212, $1768 = Aerva \ javanica$ (Burm. f.) Juss. ex Schult. (Amaranthaceae).

George Forster (unknown date, watercolour housed at the Gotha Library, University of Erfurt, Turingia, Germany). Text on watercolour: "*Iresine lanata*"; "I. 20." Reported for the Cape Verde Islands as *Illecebrum javanicum* by Forster (1789: 53).

Note: The watercolour was made during the second voyage of Captain James Cook. It was based on material collected in 1772 in the Cape Verde Islands where the species is native.

AICHRYSON × *AIZOIDES* (LAM.) E. C. NELSON, Bardeleya 11: 94, 1994 ≡ *Sempervivum aizoides* Lam., Encycl. 3(1): 290, 1789 (Crassulaceae).

De Candolle (1799-a: 4, coloured engraving. Drawing and engraving were made by P. J. Redouté). Text on engraving: "*Sedum. aïzoïdes*. Sedum. aïzoïde."

Note: This species is considered as a hybrid between *Aichryson punctatum* Link, restricted to La Gomera, Gran Canaria, El Hierro, La Palma, and Tenerife and the Fuerteventura-Lanzarote endemic *A. tortuosum* (Aiton) Webb & Berthel. (Anonymous, 2015). De Candolle (1799-a: unnumbered page associated with plate 4) indicated that the illustration was based on plants grown in the gardens of "C. Cels" in Paris (it is likely to refer to the gardens of Jacques Martin Cels).

AICHRYSON LAXUM (HAW.) BRAMWELL, Bol. Inst. Nac. Invest. Agron. 28: 207, $1968 \equiv Sem-$ pervivum laxum Haw., Saxifrag. Enum. 2: 65, 1821.

Feuillée (1724: [plate] **37**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 303). Text on painting: "*Cotyledon Saxatilis folio Anacampserotis, orbiculato*."

Note: The species is endemic to the Canary Islands where it is found in all of the islands, except in Lanzarote. Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724.

AICHRYSON TORTUOSUM (AITON) WEBB & BERTHEL., Hist. Nat. Iles Canaries Phytogr. 1: 184, 1840 ≡ Sempervivum tortuosum Aiton, Hort. Kew. 2: 148, 1789.

Curtis (1795: **N. 296**, unsigned coloured engraving). Engraving reproduced by Anonymous (2002: 16). Text in Curtis (1795: 296): "*Sempervivum Tortuosum*. Gouty Houseleek."

Note: This species is endemic to Fuerteventura and Lanzarote. The engraving was based on material cultivated in Britain where the species was originally introduced by Masson in 1779 (Curtis, 1795: 296). Most of the plates of *Curtis's Botanical Magazine* published during the 18th century were drawn by S. Edwards and engraved by F. Sansom (Blunt, 1951: 186).

AIZOON CANARIENSE L., Sp. Pl. 1: 488, 1753 (Aizoaceae).

Plukenet (1694: TAB CCCIII, Fig: 4, uncoloured engraving. Engraving executed by M. Vander Gucht). Text in Plukenet (1696: 202): "Kali aizoides Canariense [...]."
Volckamer (1700: p. 236, unsigned uncoloured engraving). Text in Volckamer (1700: 236): "Kali aisoides canariense [...]."

Nissole (1711: **Pl. 13**, uncoloured engraving. Engraving executed by P. Simonneau fil.). Text in Nissole (1711: 319): *"Ficoidea."*

Note: This species is native in the Canary Islands, the Cape Verdes, and Madeira. Volckamer's (1700) engraving was based on plants grown in his botanic garden in Nuremburg (Germany). Nissole's description does not refer explicitly to the Macaronesian islands; however, Linnaeus (1753: 488) indicated that the illustration accompanying Nissole's description is for *A. canariense*.

ALLAGOPAPPUS CANARIENSIS (WILLD.) GREUTER, Willdenowia 33: 241, 2003 = *Chrysocoma dichotoma* L. f., Suppl. Pl.: 359, 1782 (Asteraceae).

Jacquin (1784: **171**, unsigned coloured engraving). Text in Jacquin (1781-1787: 17): *"Chrysocoma dichotoma."*

Note: This species is endemic to the Canary Islands where it occurs on La Gomera, Gran Canaria, and Tenerife. The illustration was based on material collected by Masson during his visit to Tenerife (Jacquin, 1787: 44) in 1778. Engravings found in Jacquin's *Icones Plantarum Rariorum* were executed by J. Adams based on drawings made by J. Hofbauer, Franz Bauer, Ferdinand Bauer, and J. Scharf (Johnston, 1992: 505).

AMARANTHUS CF. GRAECIZANS L. SSP. SILVESTRIS (VILL.) BRENAN, Watsonia 4: 273, $1961 \equiv$ Amaranthus silvestris Vill. (Amaranthaceae).

Sloane [1707: Tab. 3, Fig. 2, unsigned uncoloured engraving. Drawing likely made by E. Kickius and engraving likely executed by M. van der Gucht (Sequeira *et al.*, 2010-a: 599)]. Reproduction of engraving published by Sequeira *et al.* (2010-a: 602). Text in Sloane (1696: 49; 1707: 17): "Blitum vulgare minus surrectum [...] In Insula Madera prope urbem Funchall collegi."

Note: Sloane's illustration was based on material collected during his visit to Madeira in 1687. Sequeira *et al.* (2010-a: 601) assigned this illustration to *Amaranthus blitum*; however, the presence of this species in Madeira is uncertain (Sequeira *et al.*, 2010-b: 71). A closer examination of Sloane's artwork and its matching specimen found in the Sloane Herbarium suggests that this engraving could tentatively be assigned to *A. graecizans* ssp. *silvestris*. The latter has axillary inflorescences and small leaves with acute to obtuse apices (vs. terminal inflorescences, and leaves with apices that are often conspicuously emarginated in *A. blitum*). We are aware that *A. graecizans* ssp. *silvestris* is not reported by Sequeira *et al.* (2010-b) for Madeira, but previous floristic treatments have included the taxon for this island [e.g., Menezes, 1909 (as *A. blitum* var. *silvestris* Menezes); Press & Short, 1994 (as *A. graecizans*); Borges *et al.*, 2008 (as *A. graecizans*); and Hansen & Sunding, 1993]. Until a comprehensive revision of this genus for Madeira is made we consider this taxon to occur in this island where it is likely to be native.

ANDRYALA GLANDULOSA LAM., Encycl. 1: 154, 1783 = *Andryala cheiranthifolia* L'Hér., Stirp. Nov.: 35, 1786 (Asteraceae).

L'Héritier (1786: XVIII, engraving. Drawing made by P. J. Redouté and engraving ex-

ecuted by C. Milsan). There are coloured and uncoloured versions of this engraving. **Note:** Madeiran endemic.

ANDRYALA PINNATIFIDA AITON, Hort. Kew. 3: 129, 1789.

Feuillée (1724: [plate] **37**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 303). Text on painting: *"hieracium Incanum Lanuginosum, Pilosellae flore."*

Note: The species is a Canary Island endemic found on all islands, except Fuerteventura and Lanzarote. Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724.

ARGEMONE MEXICANA L., Sp. Pl. 1: 508, 1753 (Papaveraceae).

George Forster (unknown date, watercolour housed at the Gotha Library, University of Erfurt, Turingia, Germany). Text on watercolour: "*Argemone hispida*."; "*mexicana*"; "I. 18." Reported for the Cape Verde Islands as *Argemone mexicana* by Forster (1789: 57).

Note: The watercolour was made during the second voyage of Captain James Cook. It was based on material collected during 1772 in the Cape Verde Islands where it is an introduced species.

Argyranthemum frutescens (L.) SCH. BIP. IN WEBB & BERTHEL., Hist. Nat. Iles Canaries Phytogr. 2: 264, $1844 \equiv Chrysanthemum$ frutescens L., Sp. Pl. 2: 887, 1753 (Asteraceae).

- Plukenet (1694: TAB. CCLXXII, Fig: 6, uncoloured engraving. Engraving executed by M. Vander Gucht). Reproduction of engraving published by Francisco-Ortega & Santos-Guerra (1999: 261). Text in Plukenet (1696: 73): "Bupthalmum Canariense Leucanthemum [...]."
- Walther [1735: Tab. XXIV, unsigned uncoloured engraving. Engraving likely executed by J. G. Krügner the elder (Stevenson, 1961: 163)]. Text in Walther (1735: 31): "Leucanthemum, Canariense, sapore."

Note: This species is endemic to the Canary Islands. It is found on all of the islands except Fuerteventura although it is regarded as introduced in Lanzarote. Walther's illustration depicts a plant cultivated in his garden at Leipzig, Germany.

ARISARUM SIMORRHINUM DURIEU, Rev. Bot. Recueil Mens. 1: 360, 1845 (Araceae).

- Baudin (1796-1798: [plate with printed number] **40**, unsigned watercolour). Painting reproduced by Herrera Piqué (2006-a: 285) and Jangoux (2009: 149). Text on watercolour: "*Arum Arisarum.*/. Lin./."
 - Ledru (1797: [plate without number] **3**, unsigned watercolour) (Fig. 7). Text on painting: "*Arum Arisarum*. Lin."

Note: Both illustrations are located in the Muséum National d'Histoire Naturelle, Paris. The watercolours are very similar and it is likely that were made by the Spanish artist A. González during a four month stay in Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists. *Arisarum vulgare* is a native species in the Canaries.



Figure 7.- Watercolour of the likely Canarian native *Arisarum simorrhinum* Durieu (Araceae) found in Ledru's (1797) manuscript. Image copyright of the Natural History Museum of Paris (manuscript number 2547).

ARISTIDA ADSCENSIONIS L., Sp. Pl. 1: 82, 1753 (Poaceae).

Sloane [1707: Tab. 2, Fig. 5, Fig. 6, unsigned uncoloured engraving. Drawing likely made by E. Kickius and engraving likely executed by M. van der Gucht (Sequeira *et al.*, 2010-a: 599)]. Reproduction of engraving published by Sequeira *et al.* (2010-a: 601). Text in Sloane (1696: 35; 1707: 16): "Gramen avenaceum, panicula [...] Prope urbem Funchall in Insula Madera inveni."

Note: Sloane's illustration was based on material collected during his visit to Madeira in 1687. The species is native to the island.

ARTEMISIA ARGENTEA L'HÉR., Sert. Angl.: 22, 1789 (Asteraceae).

L'Héritier (1792-b: [plate] **28**, uncoloured engraving. Drawing made by P. J. Redouté and engraving executed by J. B. Guyard). Illustration reproduced by L'Héritier (1963: [plate] 28).

Note: This is a Madeiran endemic. The illustration was based on material collected by Masson in this island (L'Héritier, 1789: 22) between 1776 and 1779.

ARUM ITALICUM MILL. SSP. CANARIENSE (WEBB & BERTHEL.) P. C. BOYCE, Gen. Arum: 77, $1993 \equiv Arum \ canariense$ Webb & Berthel., Hist. Nat. Iles Canaries Phytogr. 3: 293, 1847 (Araceae).

Sydney Parkinson (1769, watercolour housed at the Natural History Museum, London). Text on watercolour: "*Arum pictum*."; "S. Parkinson pinxt 1769."

Note: This taxon is endemic to the Canary Islands and Madeira. The watercolour was made during the first voyage of Captain James Cook and was based on material collected in Madeira in 1768.

ASCLEPIAS CURASSAVICA L., Sp. Pl. 1: 215, 1753 (Apocynaceae).

- Baudin (1796-1798: [plate with printed number] **41**, unsigned watercolour). Painting reproduced by Herrera Piqué (2006-a: 285) and Jangoux (2009: 150). Text on watercolour: "*Asclepias Curassavica.*/. Lin./."
- Ledru (1797: [plate without number] **4**, unsigned watercolour). Text on watercolour: *"Asclepias Curassavica.* Lin."

Note: Both illustrations are located in the Muséum National d'Histoire Naturelle, Paris. The watercolours are very similar and it is likely that were made by the Spanish artist A. González during a four month stay in Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists. *Asclepias curassavica* is an introduced species in the Canaries.

ASPLENIUM AUREUM CAV., Anales Ci. Nat. 4: 104, 1801 (Aspleniaceae).

- Baudin (1796-1798: [plate with printed number] **42**, unsigned watercolour). Painting reproduced by Herrera Piqué (2006-a: 287) and Jangoux (2009: 151). Text on watercolour: "*Asplenium Obtusi Folium.*/. Lin./."
 - Ledru (1797: [plate without number] **5**, unsigned watercolour). Text on painting: "Asplenium Obtusi Folium. Lin."

Note: The two illustrations of this Canary Island native are part of unpublished manuscripts housed in the Muséum National d'Histoire Naturelle, Paris. The watercolours are very similar and it is likely that were made by the Spanish artist A. González during a four month stay in Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists.

ASPLENIUM HEMIONITIS L., Sp. Pl. 2: 1078, 1753 (Aspleniaceae).

- Plukenet (1694: Tab. CCLXXXVII, Fig: 1, uncoloured engraving. Engraving executed by M. Vander Gucht). Text in Plukenet (1696: 155; 1700: 82): "Filix Hemionitis dicta, Maderensis pediculis splendentibus [...]."
- Feuillée (1724: [plate] **16**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris) (Fig. 5). Painting reproduced by Herrera Piqué (2006-b: 205). Text on painting: "*hemionitis foliis alatis*."

Note: Plukenet's engraving was based on plants from Madeira. Feuillée's painting depicts material from El Hierro that was studied during his voyage to the Canaries in 1724. The species is native both in the Canaries and Madeira.

ASPLENIUM MONANTHES L., Mant. Pl.: 130, 1767.

Sydney Parkinson & unknown artist (unknown year, watercolour housed at the Natural History Museum, London, original sketch was made by Parkinson, colouring executed by an unknown author). Text on watercolour: "*Asplenium monanthes* Linn." [recto] & "Madeira" [verso]. Coloured engraving of watercolour executed by Daniel Mackensie and published by Banks *et al.* (1985: 401).

Note: The watercolour was made during the first voyage of Captain James Cook and was based on material collected in Madeira in 1768. It is likely that this is a native species in this island.

ATRIPLEX GLAUCA L., Sp. Pl. ed. 2: 1493, 1763 (Amaranthaceae).

Plukenet (1694: Tab. CCCXXVI, Fig: 3, uncoloured engraving. Engraving executed by M. Vander Gucht). Text in Plukenet (1696: 31, 399): "Atriplex angustifolia Canariensis [...]."

Note: This engraving was based on Canary Islands material. The species is likely native to the archipelago.

BIDENS PILOSA L., Sp. Pl. 2: 832, 1753 (Asteraceae).

Feuillée (1724: [plate] **28**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 261). Text on painting: "*Bidens triphilla Angelica folio, flore radiata.*"

Note: Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724. This is an introduced species in the Canaries.

BLECHNUM SPICANT (L.) SM., Mém. Acad. Roy. Sci. (Turin) 5: 411, 1793 ≡ Osmunda spicant L., Sp. Pl. 2: 1066, 1753 (Blechnaceae).

Baudin (1796-1798: [plate with printed number] **74**, unsigned watercolour that is part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-a: 287) and Jangoux (2009: 165). Text on watercolour: "*Asplenium.*/."

Note: This watercolour was probably made by the Spanish artist A. González during a four month stay in Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists. *Blechnum spicant* is a native species in the Canaries.

BORRERIA VERTICILLATA (L.) G. MEY, Prim. Fl. Esseq. 83, 1818 = *Spermacoce verticillata* L., Sp. Pl. 1: 102, 1753 (Rubiaceae).

George Forster (unknown date, watercolour housed at the Gotha Library, University of Erfurt, Turingia, Germany). Text on watercolour: "*Spermacoce verticillata*, Linn."; "I. 14." Reported for the Cape Verde Islands as *Spermacoce verticillata* by Forster (1789: 49).

Note: The watercolour was made during the second voyage of Captain James Cook. It was based on material collected in 1772 in the Cape Verde Islands where it is introduced.

BOSEA YERVAMORA L., Sp. Pl. 1: 225, 1753 (Amaranthaceae).

Plukenet (1692: Tab. CCIV, Fig. 2, uncoloured engraving. Engraving executed by J. Collins). Text in Plukenet (1696: 42; 1700: 21): "Arbuscula baccifera Canariensis, [...] Yerva-mora Hispanorum [...]."

Walther [1735: **Tab. X**, uncoloured engraving. Drawing made by "C.F.S."(= C. F. Schubert) and engraving executed by "J.G.K" (= J. G. Krügner)]. Text in Walther (1735: 11): "*Frutex peregrinus, horto Bosiano Yerva mora dictus* [...]."

Note: The species is endemic in the Canary Islands where it is found on all of the islands, except in Lanzarote. However, Walther's description that accompanies the illustration does not refer to the Canary Islands. The description of this species by Linnaeus (1753: 225) indicated that an illustration made by Sloane (1725: 19, Tab. 158, Fig. 3) was for this species; however, Sloane's engraving is for a species from Jamaica (Francisco-Ortega *et al.*, in preparation).

BRIZA MINOR L., Sp. Pl. 1: 70, 1753 (Poaceae).

Sydney Parkinson (1768, watercolour housed at the Natural History Museum, London). Text on watercolour: "*Briza minor*. Linn"; "Sydney Parkinson pinxt 1768.";
"T. 26. Madeira" (recto) and "*Briza minor*" (verso).

Note: The watercolour was made during the first voyage of Captain James Cook and was based on material collected in Madeira in 1768. This is a Madeiran native species.

BYSTROPOGON CANARIENSIS (L.) L'HÉR., Sert. Angl.: 20, 1789 = Mentha canariensis L., Sp. Pl. 2: 578, 1753 (Lamiaceae).

Plukenet (1694: **Tab. CCCVI, Fig. 4; Tab. CCCVII, Fig. 1**, unsigned uncoloured engraving). Text in Plukenet (1696: 247; 1700: 127): "*Melissa (sorte) an Mentha viridis* [...] *ex Insulis Fortunatis. Polihomons Insulanis dicta & Melissophyllum cit-ratum ex Insulis Fortunatis* [...]."

- Jan Moninckx (unknown date between 1686 and 1699: Moninckx Atlas, vol. 4: [plate without number] 13, watercolour housed at the Bibliotheek van de Universiteit van Amsterdam). Text on watercolour: "Jan Moninckx. F." Text in the Moninckx Atlas: "Heliotropium Canariense, arborescens [...]."
- Commelin (1701: **Fig. 65**, unsigned uncoloured engraving). Text in Commelin (1701: 129-130): *"Heliotropium canariense arborescens* [...]."

Note: The species is endemic in the Canary Islands where it is found in all of the islands, except Fuerteventura and Lanzarote. The painting from the *Moninckx Atlas* was used to execute Commelin's engraving and material cultivated in the Botanic Garden of Amsterdam is therefore depicted in both of these illustrations.

Bystropogon Plumosus (L. F.) L'Hér., Sert. Angl.: 20, 1789 ≡ *Mentha plumosa* L. f., Suppl. Pl.: 273, 1782.

- Plukenet (1694: **Tab. CCCVII, Fig. 2**, unsigned uncoloured engraving). Text in Plukenet (1696: 248): "*Mentha Canariensis frutescens* [...]."
- L'Héritier (1792-a: [plate] **22**, uncoloured engraving. Drawing made by J. E. Sowerby and engraving executed by J. Juillet). Illustration reproduced by L'Héritier (1963: [plate] 22) and Herrera Piqué (1987: 81).

Note: Tenerife endemic. L'Héritier's illustration was based on material collected by Masson in 1778 (L'Héritier, 1789: 20).

BYSTROPOGON PUNCTATUS L'HÉR., Sert. Angl.: 20, 1789.

L'Héritier (1792-a: [plate] **23**, uncoloured engraving. Drawing made by P. J. Redouté and engraving executed by F. Hubert). Illustration reproduced by L'Héritier (1963: [plate] 23).

Note: Madeiran endemic. The illustration was based on material collected by Masson (between 1776 and 1779) or by Banks and Solander in 1768 (L'Héritier, 1789: 20).

CAESALPINIA PULCHERRIMA (L.) Sw. \equiv Poinciana pulcherrima L., Sp. Pl. 1: 380, 1753 (Fabaceae).

- Baudin (1796-1798: [plate with printed number] 35, unsigned watercolour). Painting reproduced by Herrera Piqué (2006-a: 285) and Jangoux (2009: 147). Text on watercolour: "Poinciana Pulcherrima./. Lin./."
- Ledru (1797: [plate without number] **13**, unsigned watercolour). Text on painting: *"Poinciana pulcherrima.* Lin."

Note: This is a cultivated ornamental species. These two illustrations are located in the Muséum National d'Histoire Naturelle, Paris. The watercolours are very similar and it is likely that were made by the Spanish artist A. González during a four month stay in Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists.

CANARINA CANARIENSIS (L.) VATKE, Linnaea 38: 700, $1874 \equiv Campanula \ canariensis$ L., Sp. Pl. 1: 168, 1753 (Campanulaceae).

Plukenet (1694: **Tab CCLXXVI, Fig: 1**, uncoloured engraving. Engraving executed by M. Vander Gucht). Reproduction of engraving published by Francisco-Ortega

et al. (1994: 9). Text in Plukenet (1696: 76-77): "*Campanula Canariensis Regia. s. Medium* [...]."

- Linnaeus (1738: **Tab: VIII**, uncoloured engraving. Drawing made by Georg Dionysius Ehret and engraving executed by Jan Wandelaar). Text in Linneaus (1738: 65): *"Campanula foliis hastatis dentatis, caule* [...] *Crescit in insulis Canariis."*
- Wendland (1789: [plate] **23**, watercolour was painted by Wendland and it is found in a manuscript housed at the Gottfried Wilhelm Leibniz Bibliothek Niedersächsische Landesbibliothek, Germany). Text on watercolour: "*Canarina Campanula* L."
- Baudin (1796-1798: [plate with printed number] **54**, unsigned watercolour). Painting reproduced by Herrera Piqué (2006-a: 285) and Jangoux (2009: 155). Text on watercolour: "*Canarina Campanula*./. Lin./."
- Ledru (1797: [plate without number] **6**, unsigned watercolour). Text on painting: "*Canarina Campanula*. Lin."
- Curtis (1799: N°. 444, drawing by S. E. Edwards and engraving by F. Sansom). Engraving reproduced by Anonymous (2002: 23). Text in Curtis (1799: 444): "*Canarina Campanula*. Canary Bell-Flower."

Note: This is a Canary Island endemic found on all islands except Fuerteventura and Lanzarote. Linnaeus' illustration depicts an individual cultivated in the garden of George Clifford (*Hortus Cliffortianus*) at Haarlem (Holland). Wendland's watercolour was based on material cultivated in the Herrenhausen Gardens, Hanover, Germany. Baudin's and Ledru's illustrations are located in the Muséum National d'Histoire Naturelle, Paris. These two watercolours are very similar and it is likely that were made by the Spanish artist A. González during a four month stay in Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists. Curtis's engraving was based on material cultivated in Britain where the species has been grown since 1696 (Curtis, 1799: 444).

CARTHAMUS LANATUS L., Sp. Pl. 2: 830, 1753 (Asteraceae).

George Forster (1772-1773, watercolour housed at the Natural History Museum, London). Text on watercolour: "205"; "Madeira. Sketched Aug. 1. 1772."; "*Carthamus lanatus* Linn. Pl. Atlant. in Comment. Gotting. 9. p. 66. n. 131. G. Forster. 1773." Black and white version reproduced by Hoare (1982: Fig. 6, opp. p. 148). Reported for Madeira by Forster (1789: 66).

Note: The watercolour was made during the second voyage of Captain James Cook. It depicts material of this Madeiran native species collected on the island in 1772.

CASSIA RUSCIFOLIA JACQ., Icon. Pl. Rar. 1: 8, 1781-1787 (Fabaceae).

Jacquin (1781-1787 (unknown fascicle): [plate] 71, unsigned coloured engraving).

Note: The illustration was based on material grown from seeds collected in Madeira by Masson (Jacquin, 1787: 43) between 1776 and 1779. This is an enigmatic species and based on the original description and illustration, it could be referred to either of the non-native species *Senna occidentalis* (L.) Link or *S. sophera* (L.) Roxb. (Fabaceae). According to Lowe (1862: 229) Jacquin's species is a synonym of *C. occidentalis*. Engravings found in Jacquin's *Icones Plantarum Rariorum* were executed by J. Adams based on drawings made

by J. Hofbauer, Franz Bauer, Ferdinand Bauer, and J. Scharf (Johnston, 1992: 505). This is an introduced species in this island.

CEDRONELLA CANARIENSIS (L.) WEBB & BERTHEL., Hist. Nat. Iles Canaries Phytogr. 3: 87, $1845 \equiv Dracocephalum$ canariense L., Sp. Pl. 2: 594, 1753 (Lamiaceae).

- Plukenet (1694: Tab. CCCXXV, Fig. 5; 1705: CCCXXX, Fig. 2, unsigned uncoloured engravings). Reproduction of engraving published by Francisco-Ortega *et al.* (1994: 20). Text in Plukenet (1696: 401; 1700: 128): "Melissa sorte Canarina triphyllos [...] & Melissa Canarina multifido [...]."
 - Morison (1699: **Tab. 11, Section 11**, unsigned uncoloured engraving). Text in Morison (1699: 366): "*Camphorosina trifoliate flore carneo* [...] *ex Insulis Canaricis nomine Permento de Tana* [...]."
 - Volckamer (1700: **p. 145**, unsigned uncoloured engraving). Text in Volckamer (1700: 145): "*Dracocephalo affinis americana trifoliate* [...]."
 - Jan Moninckx (unknown date between 1686 and 1700: *Moninckx Atlas*, **vol. 3**: [plate without number] **39**, watercolour housed at the Bibliotheek van de Universiteit van Amsterdam). Black and white version reproduced by Wijnands (1983: 114). Text on watercolour: "Jan Moninckx, F." Text in the *Moninckx Atlas*: "*Cedronella Canariensis viscosa* [...]."
 - Commelin (1701: **Fig. 41**, unsigned uncoloured engraving). Text in Commelin (1701: 81-82): "*Cedronella canariensis viscosa* [...]."
 - Bonelli [1775: T. III, Tab. 27, unsigned coloured engraving. Engraving likely executed by M. Bouchard likely painted by C. Ubertini, but see Stevenson (1961: 361) regarding authorship of *Hortus Romanus* illustrations]. Text on engraving: "*Moldavica Americana, trifolia odore gravi* [...]." Text in Bonelli (1775: 6): "*Moldavica Americana* [...] *Melissa sortè Canorina* [...] *Pluk. Almag.* [...]."
 - Anonymous (1779: [unnumbered plate] **9**, unsigned coloured engraving). Text on engraving: "Dracocephalum canariense [...]." Text in Anonymous (1779: 7): "Dracocephalum canariense [...]."

Note: This is a Macaronesian endemic (Azores, Canary Islands, and Madeira). The third volume of Morison's *Plantarum Historiae Universalis Oxoniensis* was edited and published by Jacob Bobart the Younger, after Morison's death (Oliver, 1913: 18). Many of Morison's illustrations were drawn and engraved by M. Burghes, F. H. van Hove, and J. Savage (Quinby, 1958: 379). Johnston (1992: 247) also listed W. Sunman and F. Barlow as artists and H. van Otteren, R. White, A. Blooteling, D. Loggan, W. Faithorne, R. Vaughan, and L. Burnford as engravers who contributed to Morison's work. Volckamer's (1700) engraving was based on plants grown in his botanic garden in Nuremburg (Germany). The painting from the *Moninckx Atlas* was used to execute Commelin's engraving and material cultivated in Bonelli's *Hortus Romanus* came from Italian gardens, very likely from Rome. It seems that Bonelli was only responsible for Volume 1 of *Hortus Romanus* (year 1772), the rest of the volumes were prepared by N. Martelli (Stevenson, 1961: 360).

CHAMAECYTISUS PROLIFERUS (L. F.) LINK, Handbuch 2: 154, 1829 SSP. PROLIFERUS \equiv Cytisus proliferus L. f. Suppl. Pl.: 328, 1782 (Fabaceae).

Plukenet (1694: Tab. CCLXXVII, Fig. 4, unsigned uncoloured engraving). Engraving reproduced by Francisco-Ortega *et al.* (1993: 88). Text in Plukenet (1696: 128): "*Cytisus arboreus, Canariensis* [...]."

Note: Endemic to Tenerife.

CISTUS SYMPHYTIFOLIUS LAM., Encycl. 2: 15, 1786 = *Cistus vaginatus* Dryand., Hort. Kew. ed. 2. 3: 304, 1811 (Cistaceae).

Jacquin (1798: **T. 282**, unsigned coloured engraving). Text in Jacquin (1798: 17): "Cistus vaginatus."

Note: Canary Island endemic, distributed in La Palma and Tenerife. The illustration was based on material from Tenerife (Jacquin, 1798: 17) grown in the Imperial Gardens of Schönbrunn, Austria. The plates of Jacquin's *Plantarum Rariorum Horti Caesarei Schoenbrunnensis* were engraved by J. Scharf and M. Sedelmayer (Stearn *et al.*, 1990: 105).

CLETHRA ARBOREA AITON, Hort. Kew. 2: 73, 1789 (Clethraceae).

- Sydney Parkinson (unknown year, watercolour housed at the Natural History Museum, London). Text on watercolour: "*Clethra arborea*."; "Sydney Parkinson pinxt: 1768"; "T. 32. Madeira." Coloured engraving of watercolour executed by G. Sibelius and published by Banks *et al.* (1985: 394).
- Francis Masson (unknown date, two watercolours housed at the Natural History Museum, London). Painting reproduced by Francisco-Ortega *et al.* (2009: 7).
- Schneevoogt [1793: [without number] 22, unsigned coloured engraving. Drawing and engraving made by H. Schwegman (Stearn, 1940; Johnston, 1992: 579)]. Text on engraving: "Clethra arborea." Text in Schneevoogt (1793: XXII): "Clethra arborea [...] Habitat in Insula Madera [...]."

Note: A Madeiran endemic. Parkinson's watercolour was made during the first voyage of Captain James Cook and was based on material collected in Madeira in 1768. Masson's illustrations depict plants collected during one of his visits to this island either between 1776 and 1779 or in 1784. Schneevoogt's engraving is based on an individual that was cultivated in Holland which is likely to have come from the Voorhelm and Schneevoogt nursery in Haarlem (Stevenson, 1961: 510).

COCCULUS PENDULUS (J. R. FORST. & G. FORST.) DIELS, Pflanzenr. IV, 94: 237, $1910 \equiv Epibaterium pendulum J. R. Forst. & G. Forst., Char. Gen. Pl.: 54, 1775 (Menispermaceae).$

- George Forster (unknown date, watercolour and uncoloured engraving are housed at the Natural History Museum, London. The V. L. Komarov Botanical Institute, St. Petersburg, Russia also houses an uncoloured engraving). Painting (Natural History Museum, London) reproduced by Romeiras *et al.* (2014: 633). Text on watercolour: "259"; "*Epibaterium pendulum*.- Pl. Atlant. in Comment. Gotting. 9. P. 69. n. 145"; "S^t Jago"; "1. 19." Reported for Santiago Island (Cape Verde Islands) by Forster (1789: 69).
- Forster & Forster (1775: [plate] **54**, unsigned uncoloured engraving. It is likely that the drawing was made by George Forster). Engraving reproduced by Francisco-

Ortega *et al.* (2015). Text on engraving: "*Monoecia Hexandra 54. Epibaterium.*" Text in Forster & Forster (1775: [unnumbered page] plant entry 54): "*Epibaterium Flores Mascuili* [...] *Pendulum. I. Epibaterium.*"

Note: The watercolour was made during the second voyage of Captain James Cook. It was executed using material collected in the Cape Verde Islands in 1772. Whilst no provenance is given in the protologue or associated engraving of *E. pendulum* (Forster & Forster, 1775), Forster (1789) indicated that the species occurs in the Cape Verdes and he did not report this taxon for any other locality visited during the voyage. Therefore it appears that this engraving and that of the hepatic *Plagiochasma rupestre* from Madeira [also published by Forster & Forster (1775)] are the earliest published Macaronesian illustrations associated with post-Linnaean plant taxonomic descriptions. *Cocculus pendulus* is a Cape Verde native species.

CONVOLVULUS ALTHAEOIDES L., Sp. Pl. 1: 156, 1753 (Convolvulaceae).

- Sydney Parkinson (1768, watercolour housed at the Natural History Museum, London). Text on watercolour: "*Convolvulus serpens*"; "Sydney Parkinson pinxt 1768." Coloured engraving of watercolour executed by T. Scratchley and published by Banks *et al.* (1985: 396). Reproduction of watercolour published by Edwards (1983: 54).
- George Forster (1772-1773, watercolour housed at the Natural History Museum, London). Text on watercolour: "45"; "*Convolvulus digitatus*."; "*althaeoides*? Pl. Atlant. in Commentat. Gotting. 9. p. 51. n. 34 "FG. sketched Aug. 2^d. 1772 painted March 8th. 1773"; "G. Forster"; "Madeira"; "I. A." Reported for Madeira as *Convolvulus althaeoides*? by Forster (1789: 51).

Note: Parkinson's painting was made during the first voyage of Captain James Cook. It was based on material collected in 1768 in Madeira. Forster's watercolour depicts a plant collected during the second voyage of Captain James Cook which visited this island in 1772. *Convolvulus althaeoides* is considered a Madeiran native species.

CONVOLVULUS CANARIENSIS L., Sp. Pl. 1: 155, 1753.

- Plukenet (1694: Tab. CCCI, Fig. 3; Tab. CCCXXV, Fig. 1, unsigned uncoloured engravings). Text in Plukenet (1696: 114, 185; 1700: 54, 103): "Convolvulus Canariensis, longioribus [...] & Horminum latifolium Canariense pilosum [...]."
- Jan Moninckx (unknown date between 1686 and 1700: *Moninckx Atlas*, vol. 3: [plate without number] 49, watercolour housed at the Bibliotheek van de Universiteit van Amsterdam). Black and white version reproduced by Wijnands (1983: 87). Watercolour reproduced by Francisco-Ortega *et al.* (2012: 124). Text on watercolour: "J. Moninckx." Text in the *Moninckx Atlas*: "*Convolvulus Canariensis, sempervirens* [...]."

Commelin (1701: **Fig. 51**, unsigned uncoloured engraving). Text in Commelin (1701: 101-102): "*Convolvulus canariensis sempervirens* [...]."

Note: This species is endemic to the Canary Islands and is found on all islands except Fuerteventura and Lanzarote. The painting from the *Moninckx Atlas* was used to execute Commelin's engraving and material cultivated in the Botanic Garden of Amsterdam is depicted in these two illustrations.

CONVOLVULUS FLORIDUS L. F., Suppl. Pl.: 136, 1782.

Jacquin (1781-1787 (unknown fascicle): [plate] **34**, unsigned coloured engraving). Text in Jacquin (1781-1787: 4).

Note: This species is endemic in the Canary Islands and is found on all islands. The illustration was based on material grown from seeds collected in Tenerife by Masson (Jacquin, 1787: 62) in 1778. Engravings found in Jacquin's *Icones Plantarum Rariorum* were executed by J. Adams based on drawings made by J. Hofbauer, Franz Bauer, Ferdinand Bauer, and J. Scharf (Johnston, 1992: 505).

CONVOLVULUS FRUTICULOSUS DESR. IN LAM., Encyc. 3: 541, 1789.

Plukenet (1694: **Tab. CCCXXIV, Fig. 4**, unsigned uncoloured engraving). Text in Plukenet (1696: 400): "*Convolvulus Canariensis minimus* [...]."

Note: The species is endemic to Tenerife.

CORCHORUS TRILOCULARIS L., Mant. Pl.: 77, 1767 (Malvaceae).

George Forster (unknown date, watercolour housed at the Gotha Library, University of Erfurt, Turingia, Germany). Text on watercolour: "*Corchorus trilocularis*. Linn." Reported for the Cape Verde Islands as *Corchorus trilocularis* by Forster (1789: 57).

Note: The watercolour was made during the second voyage of Captain James Cook. It was executed using material collected in the Cape Verde Islands in 1772. It is uncertain if this is a native or introduced species in these islands.

COSENTINIA VELLEA (AITON) TOD. SSP. BIVALENS (REICHST.) RIVAS-MART. & SALVO, Anal. Jard. Bot. Madrid 41: 196, $1984 \equiv Notholaena \, lanuginosa$ Poir. ssp. bivalens Reichst. = Cheilanthes catanensis (Cosent.) H. P. Fuchs, Brit. Fern Gaz. 9(2): 45, $1961 \equiv Acrostichum$ catanense Cosent., Atti Accad. Gioenia Sci. Nat. Catania 1/2: 207-208, 1827 (Pteridaceae).

Plukenet (1694: **Tab. CCLXXXI, Fig. 4**, unsigned uncoloured engraving). Text in Plukenet (1696: 150; 1700: 77): "*Filicula crispa lanugine* [...] *ex Insulis Fortunatis* [...]."

Note: This engraving was based on Canary Island material. The species is native to the Canaries.

CRAMBE STRIGOSA L'HÉR., Stirp. Nov.: 151, 1791 = *Myagrum arborescens* Jacq., Icon. Pl. Rar. 1: 12, 1781-1787 (Brassicaceae).

Jacquin (1781-1787: [plate] 120, unsigned coloured engraving).

L'Héritier (1791-a: LXXII, engraving. Drawing made by P. J. Redouté and engraving executed by J. Juillet). There are coloured and uncoloured versions of this engraving.

Note: This Canary Island endemic occurs on La Gomera and Tenerife. Both illustrations were based on material collected in Tenerife by Masson (Jacquin, 1787: 39; L'Héritier, 1791-a: 151-152) in 1778. Engravings found in Jacquin's *Icones Plantarum Rariorum* were executed by J. Adams based on drawings made by J. Hofbauer, Franz Bauer, Ferdinand Bauer, and J. Scharf (Johnston, 1992: 505).

CULLEN AMERICANUM (L.) RYDB., N. Amer. Fl. 24(1): 3, $1919 \equiv Psoralea \ americana$ L., Sp. Pl. 2: 763, 1753 (Fabaceae).

George Forster (1772-1773, watercolours are housed at the Gotha Library, University of Erfurt, Turingia, Germany, and the Natural History Museum, London, and V. L. Komarov Botanical Institute, St. Petersburg, Russia. One uncoloured engraving housed at the the Natural History Museum, London). Text on watercolour (Gotha Library), unfinished painting: "54"; "*Psoralea repanda.*"; "I. 5." Text on watercolour (Natural History Museum, London): "201"; "illeg. 79"; "*Psoralea repanda.*"; "*americana* Pl. Atlant. in Commentat. Gotting. 9. p. 64. n. 119"; "FJ. sketched. Aug. 3. 1772. painted Feb^r. 25. 1773"; "Ge. Fosrter." Reported for Madeira as *Psoralea americana* by Forster (1789: 64).

Note: These two watercolours were made during the second voyage of Captain James Cook. They were based on material of this introduced species collected in Madeira in 1772.

CYCLOSORUS DENTATUS (FORSSK.) CHING, Bull. Fan Mem. Inst. Biol. Bot. 8(4): 206, 1938 = *Polypodium dentatum* Forssk., Fl. Aegypt.-Arab.: 185, 1775 (Thelypteridaceae).

Sydney Parkinson & unknown artist (unknown date, watercolour housed at the Natural History Museum, London, original sketch made by Parkinson, colouring executed by an unknown author). Text on watercolour: "*Polypodium thelipteris* Linn." (recto) and "Madeira" (verso).

Note: The watercolour was made during the first voyage of Captain James Cook. It was based on material collected in Madeira in 1768. This is a native species in this island.

CYNARA CARDUNCULUS L. Sp. Pl. 2: 827, 1753 (Asteraceae).

Feuillée (1724: [plate] **33**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris) (Fig. 8). Painting reproduced by Herrera Piqué (2006-b: 282). Text on painting: "*Cinara Sylvestris Baeticae aculeis longissimis munita, caule et foliis albis.*"

Note: Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724. It is a Canary Island native species.

Cystopteris viridula (Desv.) Desv, Mém. Soc. Linn. Paris 6: 264, 1827 ≡ *Aspidium viridulum* Desv., Berl. Mag. 5: 321, 1811 (Cystopteridaceae).

Plukenet (1694: **TAB CCLXXXIV, Fig: 4**, uncoloured engraving. Engraving executed by M. Vander Gucht). Text in Plukenet (1696: 150): "*Filix Saxatilis pervenusta* [...] *Adianthum Maderense* [...]."

Note: This engraving was based on plants from Madeira. The species is native to this island.

DAPHNE GNIDIUM L., Sp. Pl. 1: 357, 1753 (Thymelaeaceae).

Feuillée (1724: [plate] **32**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 280). Text on painting: "*Thymalaea linariae folio*."

Note: Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724. It is likely that this is a native species in the Canary Islands.



Figure 8.- Achromatic watercolour of the Canarian native *Cynara cardunculus* L. (Asteraceae) found in Feuillée's (1724) manuscript. Image copyright of the Natural History Museum of Paris (manuscript number 38).

DAVALLIA CANARIENSIS (L.) SM., Mém. Acad. Roy. Sci. Turin 5: 414, 1793 = *Trichomanes canariense* L., Sp. Pl. 2: 1099, 1753 (Davalliaceae).

Plukenet (1694: TAB. CCXCI, Fig: 2, uncoloured engraving. Engraving executed by M. Vander Gucht). Text in Plukenet (1696: 156): "*Filix ramosa Canariensis* [...]."

Sloane [1707: Tab. 2, Fig. 3, unsigned uncoloured engraving. Drawing likely made by E. Kickius and engraving likely executed by M. van der Gucht (Sequeira *et al.*, 2010-a: 599)]. Reproduction of engraving published by Sequeira *et al.* (2010-a: 601). Text in Sloane (1696: 22; 1707: 16): "Adiantum ramosum majus [...] In Insula Madera ultra urbem Funchal [...]."

Jacquin (1783: [plate] **200**, unsigned coloured engraving). Text in Jacquin (1781-1787: 20): *"Trichomanes canariense."*

Note: Sloane's illustration was based on plants collected in Madeira during his visit to this island in 1687. Engravings found in Jacquin's *Icones Plantarum Rariorum* were executed by J. Adams based on drawings made by J. Hofbauer, Franz Bauer, Ferdinand Bauer, and J. Scharf (Johnston, 1992: 505). This species is native in the Canaries and Madeira.

DESCURAINIA MILLEFOLIA (JACQ.) WEBB & BERTHEL., Hist. Nat. Iles Canaries Phytogr. 1: 73, 1836 ≡ Sinapis millefolia Jacq., Icon. Pl. Rar. 1: 13, 1781-1787 (Brassicaceae).

Jacquin (1783: [plate] 127, unsigned coloured engraving).

Wendland (1789: [plate] 170, watercolour painted by Wendland and included in a manuscript housed at the Gottfried Wilhelm Leibniz Bibliothek - Niedersächsische Landesbibliothek, Germany). Text on watercolour: "Sinapis millefolia Jacq."

Note: Canary Island endemic found on La Gomera, La Palma, and Tenerife. Jacquin's engraving was based on plants grown from seeds collected in Tenerife by Masson (Jacquin, 1787: 41) in 1778. Engravings found in Jacquin's *Icones Plantarum Rariorum* were executed by J. Adams based on drawings made by J. Hofbauer, Franz Bauer, Ferdinand Bauer, and J. Scharf (Johnston, 1992: 505). Wendland's watercolour was painted using material cultivated in the Herrenhausen Gardens, Hanover, Germany.

DIOSPYROS LOTUS L., Sp. Pl. 2: 1057, 1753 (Ebenaceae).

Sydney Parkinson (1768, watercolour housed at the Natural History Museum, London). Text on watercolour: "*Diospyros lotus* Linn."; "Sydney Parkinson pinxt. 1768."; "T. 35 Madeira." Watercolour reproduced by Edwards (1983: 51).

Note: The watercolour was made during the first voyage of Captain James Cook. It was based on material of this cultivated species collected in Madeira in 1768.

DRACAENA DRACO (L.) L., Syst. Nat., ed. 12. 2: 246, 1767 ≡ *Asparagus draco* L., Sp. Pl., ed. 2. 1: 451, 1762 (Asparagaceae).

- Clusius (1576: **12**, unsigned uncoloured woodcut). Text on illustration "Draco arbor." A copy of this illustration was reproduced in Clusius (1601: **1**, unsigned uncoloured woodcut). Text in Clusius (1576: 11, 13-15): "*De Dracone arbore* [...]."Text in Clusius (1601: 1-2): "*Draco* [...]."
- Gerard (1597: **1339**, unsigned uncoloured woodcut). Text in Gerard 1597: 1339-1340: "Of the Dragon tree [...] "This tree groweth on an Iland whuch the Portingales call Madera, and in one of the Carnaie Ilands."

- Feuillée (1724: [plates] 34, 35, unisigned achromatic watercolours, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 292, 294). Text on painting: "Draco arbor Canariensis racemoso [illeg.] fructu" (plate 34). "Racemifera draconensis." (plate 35).
- Weinmann [1745: N. 785, a, coloured engraving, signed by "H." (= J. J. Haid)]. Text on engraving: "Palma prumifera foliis Yuccae [...] sanguineum Draconis funderis [...]." Text in Weinmann (1745: 27-30): "Palma prunifera [...]."
- Blackwell (1737-1739: **Plate 358**, coloured engraving drawn and engraved by Blackwell). Text on coloured engraving: "The Dragon-Tree [...]."Text in Blackwell (1737-1739: text associated with plate 358): "The Dragon-Tree. Draco Arbor [...] It grows in the Madera and Canary Islands."
- Blackwell (1754-1757: [plate] **358**, coloured engraving drawn and engraved by Blackwell). Text on engraving: "*Draco Arbor* [...]." Text in Blackwell (1758-1759: text associated with plate 358): "*Draco arbor* [...] *Crescit in Madera et insulis Canarinis*." *Herbarium blackwellianum. Vol. 4*."
- Vandelli (1768: **Fig. I, Fig. II, Fig. III, Fig. IV**, unsigned uncoloured engraving). Text on engraving: "*Draco yuciformis*."
- Römer (1796: Tab. II^a, Tab. II^b, uncoloured engraved signed by G. Vogel). Text on engraving: "Draco Yucciformis vel Dracaena." Text in Römer (1796: 37-46, previously published by Vandelli (1768): "Dissertatio de arbore draconis [...]."
- Ledru (1797: [plate without number] **8**, unsigned watercolour that is part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Text on painting: "*Dracaena Draco*. Lin."

Note: As early as 1494, a specimen of the dragon-tree, a species then known only from the Macaronesian islands, was cultivated in the Convento da Santíssima Trindade in Lisbon (De Paz-Sánchez, 2004). The individual depicted by Clusius was found in the grounds of the Convento de Nossa Senhora da Graça, in the same city. The vast majority of Clusius's (1576) woodcuts were apparently drawn by Clusius himself, but at least 52 of them were made by P. van der Borch (Quinby, 1958: 133; Johnston, 1992: 100). Woodcuts for Clusius's illustrations were executed by Gerard van Kampen (Johnston, 1992: 100). Gerard's (1597) illustration has two woodcuts, the first one depicts a tree that is mirror image of the one published by Clusius (1576). The second of Gerard's plates shows three fruits, one of them with details of a seed that has the shape of a dragon. Plates found in Weinmann's Phytanthoza iconographia were engraved by J. J. Haid, J. E. Ridinger, and J. Seuter. These engravings were based on the drawings made by G. D. Ehter, N. Asami, and others (Johnston, 1992: 358). The illustration published by Blackwell (1754-1757) is very similar to the one found in Blackwell (1737-1739). Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724. Descriptions associated with Blackwell's and Römer's engraving indicated that this species is found in the Canaries and Madeira. Römer's illustration was based on that published by Vandelli. It seems that the watercolour found in Ledru's manuscript was made by the Spanish artist A. González during a four month expedition to Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists. Previous reviews on iconography and scientific illustration of *Dracaena draco* were published by González Araña (2005), Santos-Guerra (2009), Herrera Piqué (2011), and Barrios García (2012-a). Based on these reviews we know that Pierre Ozanne also made at least one painting of the famous draco tree located in the Franchy's Garden (La Orotava, Tenerife); a copy of this painting was subsequently published by Humboldt (1810-1813: plate 69 in Barrios García, 2012-a: 751). Pierre Ozanne was a famous French painter who joined two French scientific expeditions that visited the Canaries in late 1771 and early 1772 (*La Flore* expedition under the command of Lieutennant J.-R. de Verdun de La Crenne) and in late 1776 and early 1777 (*La Boussole* and *L'Espiègle* expedition under the command of J.-C. de Borda) (Giret, 1977; Barrios García, 2012-a: 750; De Uriarte *et al.*, 2000: 134-137, 143-149). It appears that Ozanne's illustration was made during his second visit to Tenerife (Barrios García, 2012-a: 751). This is a native species in Macaronesia, occurring on all of the Macaronesian archipelagos, although its status in the Azores is unclear.

DRYOPTERIS OLIGODONTA (DESV.) PIC.-SERM., Webbia 8: 150, $1951 \equiv Aspidium \ oligodonton$ Desv., Berl. Mag. 5: 322, 1811 (Dryopteridaceae).

Feuillée (1724: [plate] **38**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 307). Text on painting: "*filix ramosa maxima, Pinnulis dentatis, Cauliculis nigris, et spinosis.*"

Note: This is a Macaronesian endemic occurring on the Canaries and the Cape Verdes. Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724.

ECHIUM CANDICANS L. F., Suppl. Pl. 131, 1782 (Boraginaceae).

Jacquin (1784: [plate] **30**, unsigned coloured engraving). Text in Jacquin (1781-1787: 4).

Note: Madeiran endemic. It seems that the illustration was based on plant material collected by Masson between 1776 and 1779. However, Jacquin (1787: 44) mistakenly indicated that this species was grown in Tenerife. Engravings found in Jacquin's *Icones Plantarum Rariorum* were executed by J. Adams based on drawings made by J. Hofbauer, Franz Bauer, Ferdinand Bauer, and J. Scharf (Johnston, 1992: 505).

ECHIUM CF. *LEUCOPHAEUM* WEBB EX SPRAGUE & HUTCH., Bull. Misc. Inform. Kew 1914(3): 119, 1914.

Plukenet (1694: **TAB. CCLXXVIII, Fig. 5**, unsigned uncoloured engraving). Text in Plukenet (1696: 133): "*Echium album Maderense* [...]."

Note: The species is endemic to Tenerife.

ECHIUM PLANTAGINEUM L., Mant. Pl. Altera: 202, 1771.

George Forster (1772-1773, watercolour housed at the Gotha Library, University of Erfurt, Turingia, Germany). Text on watercolour: "66"; "*Echium procumbens*.";
"FJ. sketched Aug. 3^d. 1772 painted Feb^r. 20th, 1773"; "I. 8." Reported for Madeira as *E. vulgare* by Forster (1789: 51).

Note: The watercolour of this Madeiran native species was made during the second voyage of Captain James Cook and was painted based on material collected in Madeira in 1772.

ECHIUM STRICTUM L. F., Suppl. Pl.: 130, 1782.

Jacquin (1797-a: **T. 35**, unsigned coloured engraving). Text in Jacquin (1791-a: 15). **Note:** Canary Islands endemic. The illustration was based on material from Tenerife (Jacquin, 1791-a: 15) grown in the imperial Gardens of Schönbrunn, Austria. The plates of Jacquin's *Plantarum Rariorum Horti Caesarei Schoenbrunnensis* were engraved by J. Scharf and M. Sedelmayer (Stearn *et al.*, 1990: 105).

EPILOBIUM PARVIFLORUM SCHREB., Spic. Fl. Lips.: 146, 1771 (Onagraceae).

Feuillée (1724: [plate] 9, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 140). Text on painting: "*Chamaenerion villosum parvo flore*."
Note: Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724. It is likely that this is a native species in the Canary Islands.

EPILOBIUM CF. *TETRAGONUM* L., Sp. Pl. 1: 348, 1753 or *E.* CF. *HIRSUTUM* L., Sp. Pl. 1: 347, 1753.

Feuillée (1724: [plate] 9, achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 140). Text on painting: "Chamaenerion angustifolium."

Note: Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724. It is likely that these are two native species in these islands.

ERYSIMUM BICOLOR (HORNEM.) DC., Syst. Nat. 2: 509, 1821 ≡ *Cheiranthus bicolor* Hornem., Hort. Bot. Hafn. 2: 613, 1815 = *Cheiranthus mutabilis* L'Hér., Stirp. Nov: 92, 1788 (Brassicaceae).

Curtis (1793-a: N.º 195, coloured engraving. Engraving executed by F. Sansom). Engraving reproduced by Anonymous (2002: 13). Text in Curtis (1793-a: 195): *"Cheiranthus Mutabilis.* Changeable Wall-Flower."

Note: Madeiran endemic. The engraving was based on material cultivated in Britain where the species was originally introduced from Madeira by Masson in 1779 (Curtis 1793-a: 195). Most of the plates of *Curtis's Botanical Magazine* published during the 18th century were drawn by S. Edwards and engraved by F. Sansom (Blunt, 1951: 186).

EUGENIA UNIFLORA L., Sp. Pl. 1: 470, 1753 (Myrtaceae).

Sydney Parkinson (1768, watercolour housed at the Natural History Museum, London) (Fig. 9). Text on watercolour: "Myrtus pulposus.; "Sydney Parkinson pinxt: 1768."; "T. 29. Madeira."

Note: The watercolour was made during the first voyage of Captain James Cook. It was based on material of this cultivated species collected in Madeira in 1768.

 EUPHORBIA BALSAMIFERA AITON, Hort. Kew. 2: 137, 1789 SSP. BALSAMIFERA (Euphorbiaceae).
 Maria Moninckx (unknown date between 1699 and 1700: Moninckx Atlas, vol. 5: [plate without number] 32, watercolour housed at the Bibliotheek van de Universiteit van Amsterdam) (Fig. 10). Text on watercolour: "maria moninckx f." Text in the Moninckx Atlas: "Tithymalus canariensis [...]."



Figure 9.- Watercolour of the cultivated *Eugenia uniflora* L. (Myrtaceae) made by Sydney Parkinson in 1768, based on material found in Madeira during the first voyage of Captain Cook. Image copyright of the Natural Museum of London.



5: [plate without number] 32) made by Maria Moninckx. Unknown date between 1686 and 1700. Image copyright of the Bibliotheek van de Uni-Figure 10.- Watercolour of the Canarian native Euphorbia balsamifera Aiton ssp. balsamifera (Euphorbiaceae) located at the Moninckx Atlas (vol. versiteit van Amsterdam. Commelin (1701: **Fig. 105**, unsigned uncoloured engraving). Text in Commelin (1701: 209): *"Tithymalus canariensis* [...]."

Note: The painting from the *Moninckx Atlas* was used to execute Commelin's engraving and material cultivated in the Botanic Garden of Amsterdam is thus depicted in both illustrations. The species is native to the Canary Islands.

EUPHORBIA CANARIENSIS L., Sp. Pl. 1: 450, 1753.

- Plukenet (1694: **TAB. CCCXX, Fig. 2**, unsigned uncoloured engraving). Reproduction of engraving published by Francisco-Ortega *et al.* (1994: 26). Text in Plukenet (1696: 370; 1700: 182): "*Tithymalus aizoides lactifluus s. Euphorbia Canariensis* [...]."
- Jan Moninckx (unknown date between 1686 and 1700: *Moninckx Atlas*, **vol. 5**: [plate without number] **31**, watercolour housed at the Bibliotheek van de Universiteit van Amsterdam). Black and white version reproduced by Wijnands (1983: 97). Text on watercolour: "J. Moninckx F." Text in the *Moninckx Atlas*: "*Tithymalus aizoides fruticosus canariensis* [...]."
- Commelin (1701: **Fig. 104**, unsigned uncoloured engraving). Text in Commelin (1701: 207-208): "*Tithymalus aizoides fruticosus canariensis* [...]."
- Baudin (1796-1798: [plate with printed number] **64**, unsigned watercolour that is part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Jangoux (2009: 64). Text on watercolour: "*Euphorbia.*/."

Note: This is a Canary Island endemic, found on all islands except Lanzarote. The painting from the *Moninckx Atlas* was used to execute Commelin's engraving and material cultivated in the Botanic Garden of Amsterdam is thus depicted in both illustrations. It is likely that the watercolour found in Baudin's manuscript was made by the Spanish artist A. González during a four month expedition to Tenerife (November 1796 - March 1797), en route to the Antilles, that was led by Captain Nicolas Baudin and on which André-Pierre Ledru was one of the botanists.

EUPHORBIA LAMARCKII SWEET, Hort. Suburb. London: 107, 1818.

Plukenet (1694: **TAB. CCCXIX, Fig. 5**, unsigned uncoloured engraving). Text in Plukenet (1696: 369; 1700: 181): *"Tithymalus dendroides Linariae foliis ex Insula Canarina."*

Note: Canary Island endemic species found in La Gomera, El Hierro, La Palma, and Tenerife.

EUPHORBIA TERRACINA L., Sp. Pl., ed. 2. 1: 654, 1762.

Sloane [1707: Tab. 4, Fig. 3, unsigned uncoloured engraving. Drawing likely made by E. Kickius and engraving likely executed by M. van der Gucht (Sequeira *et al.*, 2010-a: 599)]. Reproduction of engraving published by Sequeira *et al.* (2010-a: 604). Text in Sloane (1696: 82; 1707: 18): "*Tithymalus perennis & procerior* [...] *In Insula Madera prope urbem Funchal collegi.*"

Note: Sloane's illustration was based on material collected during his visit to Madeira in 1687. This species is native to Madeira.

FAGONIA CRETICA L., Sp. Pl. 1: 386, 1753 (Zygophyllaceae).

- Baudin (1796-1798: [plate with printed number] **33**, unsigned watercolour). Painting reproduced by Jangoux (2009: 148). Text on watercolour: "*Fagonia cretica.*/. Lin./."
- Ledru (1797: [plate without number] 9, unsigned watercolour). Text on painting: *"Fagonia Cretica.* Lin:"

Note: These two illustrations are part of manuscripts located in the Muséum National d'Histoire Naturelle, Paris. The watercolours are very similar and it is likely that were made by the Spanish artist A. González during a four month stay in Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists. It is likely that this species is native to the Canaries.

FICUS CARICA L., Sp. Pl. 2: 1059, 1753 (Moraceae).

Plukenet (1694: **TAB. CCLXXXI, Fig. 1**, unsigned uncoloured engraving). Text in Plukenet (1696: 144): "*Ficus sylvestris* [...] *Hujus ramuli ex Insulis Fortunatis allati.*"

Note: The engraving of this cultivated species was based on Canary Islands material.

FOENICULUM VULGARE MILL., Gard. Dict. ed. 8: 1, 1768 (Apiaceae).

Baudin (1796-1798: [plate with printed number] **70**, unsigned watercolour). Painting reproduced by Herrera Piqué (2006-a: 285) and Jangoux (2009: 163). Text on watercolour: "*Anethum foeniculum*./. Lin./."

Ledru (1797: [plate without number] **2**, unsigned watercolour) (Fig. 11). Text on painting: "*Anethum foeniculum*. Lin."

Note: These two illustrations are located in the Muséum National d'Histoire Naturelle, Paris. The watercolours are very similar and it is likely that were made by the Spanish artist A. González during a four month stay in Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists. This species is likely native in the Canaries.

FORSSKAOLEA ANGUSTIFOLIA RETZ., Observ. Bot. 3: 31, 1783 (Urticaceae).

- Plukenet (1694: CCCXV, Fig. 4, unsigned uncoloured engraving). Text in Plukenet (1696: 346): "Sideritis canariensis Mocanes dicta [...]."
- Petiver (1709: TAB VII, 2, unsigned uncoloured engraving). Reproduction of engraving published by Santos-Guerra *et al.* (2011: 1748). Text in Petiver (1702: 12; 1709: 4): "*Parietaria canariensis foliis* [...] & *Parietaria Canar. Fol.* [...]."

Note: A Canary Island endemic found on all islands. Petiver's illustration was based on material collected in the island of La Palma by J. Cuninghame between December 1697 and February 1698.



Figure 11.- Watercolour of the likely Canarian native *Foeniculum vulgare* Mill. (Apiaceae) found in Ledru's (1797) manuscript. Image copyright of the Natural History Museum of Paris (manuscript number 2547).

FRANGULA AZORICA GRUBOV, Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 8: 259, 1949 = *Rhamnus latifolia* L'Hér., Sert. Angl.: 5, 1789 [as "*latifolius*"] (Rhamnaceae).

L'Héritier (1790: [plate] **8**, uncoloured engraving. Drawing made by P. J. Redouté and engraving executed by F. Hubert). Illustration reproduced by L'Héritier (1963: [plate] 8). Text in L'Héritier (1789: 5-6): "*Rhamnus latifolius*."

Note: This is a Macaronesian endemic occurring on the Azores and Madeira. However, the occurrence of this species in Madeira is based on fossil evidence, and it is believed that it is extinct in this island (Press & Short, 1994: 215). The illustration was based on material collected on the island of São Miguel in the Azores by Masson (L'Héritier, 1789: 5-6) in 1777.

FUMARIA MURALIS SOND. EX W. D. J. KOCH., Syn. Fl. Germ. Helv. ed. 2: 1017, 1845 (Papaveraceae).

Feuillée (1724: [plate] **26**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 252). Text on painting: *"fumaria officinarum tenuifolia.*"

Note: Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724. It is likely that this is a native species in the Canary Islands.

GENISTA TENERA (JACQ. EX MURRAY) KUNTZE, Revis. Gen. Pl. 1: 190, $1891 \equiv Cytisus$ tener Jacq. ex Murray in L., Syst. Veg.: 667, 1784 = Spartium virgatum Aiton, Hort. Kew. 3: 11, 1789 (Fabaceae).

Jacquin (1784: 147, unsigned coloured engraving). Text in Jacquin (1781-1787: 15): *Cytisus tener*.

L'Héritier (1805: [plate] **86**, engraving. Drawing made by P. J. Redouté and engraving executed by J. Juillet) (Fig. 3). There are coloured and uncoloured versions of this engraving. Text in L'Héritier (1791-b: 183): "*Spartium virgatum*."

Note: This is a Madeiran endemic. Both illustrations were based on material collected in Madeira by Masson (Jacquin, 1787: 40; L'Héritier, 1791-a: 151-152) between 1776 and 1779. However, Jacquin (1787: 40) mistakenly indicated that the species was collected in Tenerife (Gibbs, 1974: 36). Engravings found in Jacquin's *Icones Plantarum Rariorum* were executed by J. Adams based on drawings made by J. Hofbauer, Franz Bauer, Ferdinand Bauer, and J. Scharf (Johnston, 1992: 505).

GERANIUM PALMATUM CAV., Diss. 4: 216, 1787 (Geraniaceae).

- Cavanilles (1787: **Tab. LXXXIV**, **2**, uncoloured engraving. Drawing made by A. J. Cavanilles and engraving executed by F. N. Sellier). Text with species description in Cavanilles (1787: 216-217).
- Wendland (1789: [plate] **69**, watercolour painted by Wendland and included in a manuscript housed at the Gottfried Wilhelm Leibniz Bibliothek - Niedersächsische Landesbibliothek, Germany) (Fig. 12). Text on watercolour: "*Geranium palmatum* Cavn."
- Curtis (1793-b: Nº 206, coloured engraving. Engraving executed by F. Sansom). Text in Curtis (1793-a: 206): "Geranium Anemonefolium. Anemone-Leav'd Geranium."



Figure 12.- Watercolour of the Madeiran endemic *Geranium palmatum* Cav. (Geraniaceae) by Johann Wendland found in his unpublished manuscript (Wendland, 1789). Image copyright of the Gottfried Wilhelm Leibniz Bibliothek - Niedersächsische Landesbibliothek, Germany.

Note: This is a Madeiran endemic. Cavanilles (1787: 216-217) reported this species for the Royal Gardens of Paris (= "R. H. P") and we cannot rule out the possibility that his illustration depicts plants grown in this garden. Wendland's watercolour was based on material cultivated in the Herrenhausen Gardens, Hanover, Germany. Curtis's engraving depicts a plant cultivated in Britain. Curtis (1793-a: 206) reported that the species was introduced into the United Kingdom by Masson in 1778 but suggested that it was introduced from Tenerife (where it does not occur) rather than Madeira where it is endemic. Most of the plates of *Curtis's Botanical Magazine* published during the 18th century were drawn by S. Edwards and engraved by F. Sansom (Blunt, 1951: 186).

GERANIUM REUTERI AEDO & MUÑOZ GARM., Kew Bull. 52: 726, 1997 ≡ *Geranium canariense* Reut., Cat. Graines Jard. Bot. Genève 1857: 4, 1858.

L'Héritier (1787-1788: [plate] **36**, uncoloured engraving. Drawing made by P. J. Redouté and engraving executed by F. Hubert). Text on engraving: "*Geranium anemonefolium*."

Note: A Canary Island endemic found on all islands except Fuerteventura and Lanzarote.

GESNOUINIA ARBOREA (L. F.) GAUDICH., Voy. Uranie: 502, 1830 ≡ *Urtica arborea* L. f., Suppl. Pl.: 417, 1782. ≡ *Parietaria arborea* (L. f.) L'Hér., J. Phys. Chim. Hist. Nat. Arts 33: 55, 1788 (Urticaceae).

L'Héritier (1786: **XX**, engraving. Drawing made by L. Fossier and engraving executed by J. Juillet). There are coloured and uncoloured versions of this illustration. Text with new combination (i.e., *P. arborea*) and species description found in L'Héritier (1788-a: 55-56).

Note: The species is endemic in the Canary Islands where it is found on all islands except Fuerteventura and Lanzarote. The illustration was based on material collected in Tenerife by Masson (L'Héritier, 1786: 39) in 1778.

GLOBULARIA SALICINA LAM., Encycl. 2: 732, 1788 (Globulariaceae).

- Sloane [1707: Tab. 5, Fig. 3, unsigned uncoloured engraving. Drawing likely made by E. Kickius and engraving likely executed by M. van der Gucht (Sequeira *et al.*, 2010-a: 599)]. Reproduction of engraving published by Sequeira *et al.* (2010-a: 605). Text in Sloane (1696: 124; 1707: 19): "*Alypum sive Herba terribilis* [...] *Prope urbem Funchall in insula Madera Collegi.*"
- Sydney Parkinson (1768, watercolour housed at the Natural History Museum, London). Text on watercolour: "*Alypum angustifolium*."; "Sydney Parkinson pinxt 1768."; "T. 37. Madeira." Coloured engraving of watercolour executed by T. Scratchley and published by Banks *et al.* (1985: 399). Watercolour reproduced by Edwards (1983: 52).

Note: This is a Macaronesian endemic occurring on the Canary Islands and Madeira. The depicted plants were collected in Madeira. Sloane's illustration was based on material collected during his visit to this island in 1687. Parkinson's watercolour was made during the first voyage of Captain James Cook which visited Madeira in 1768.

GONOSPERMUM FRUTICOSUM (BUCH) LESS, Syn. Gen. Compos.: 263, $1832 \equiv Chrysanthemum$ fruticosum Buch, Abh. Berl. Akad.: 375, 1819 (Asteraceae).

Feuillée (1724: [plate] **37**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 303). Text on painting: "*Jacobea Affricana Absintis foliis*."

Note: The species is endemic to the Canary Islands where it is found in La Gomera, El Hierro, and Tenerife. Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724.

GYMNOSPORIA CASSINOIDES (L'HÉR.) MASF., Anales Soc. Esp. Hist. Nat. 10: 176, $1881 \equiv Celastrus cassinoides$ L'Hér., Sert. Angl.: 6, 1789 (Celastraceae).

L'Héritier (1790: [plate] **10**, uncoloured engraving. Drawing made by P. J. Redouté and engraving executed by F. Hubert). Illustration reproduced by L'Héritier (1963: [plate] 10).

Note: The species is endemic to the Canary Islands where it is found on all of the islands except Lanzarote. L'Héritier (1789: 6) reported this species both for the Canary Islands and Madeira; however, plants from Madeira belong to a different species [*Maytenus umbellata* (R. Br.) Mabb.] (Mabberley, 1981). The illustration was based on material collected in Tenerife by Masson (L'Héritier, 1789: 6) in 1778.

HEBERDENIA EXCELSA (AITON) BANKS EX ROEM. & SCHULT., Syst. Veg. Ed. 15: 508, $1819 \equiv Ardisia excelsa$ Aiton, Hort. Kew. 1: 261, 1789 (Primulaceae).

Sydney Parkinson (1768, watercolour housed at the Natural History Museum, London). Text on watercolour: "*Heberdenia excelsa*."; "Sydney Parkinson pinxt 1768.";
"T. 39 Madeira." Coloured engraving of watercolour executed by D. Mackenzie and published by Banks *et al.* (1985: 395). Watercolour reproduced by Edwards (1983: 49).

Note: This is a Macaronesian endemic, distributed on the Canary Islands and Madeira. The watercolour was made during the first voyage of Captain James Cook. It was based on material collected in Madeira in 1768.

HELIANTHEMUM CANARIENSE (JACQ.) PERS., Syn. Pl. 2: 78, $1806 \equiv Cistus \ canariensis \ Jacq.$, Misc. Austriac. 2: 339, 1781 (Cistaceae).

Jacquin (1781-a: 97, unsigned coloured engraving).

Note: This is a Canary Island endemic, found on all islands. The illustration was based on plants that were grown from seeds collected in Fuerteventura by Masson (Jacquin, 1781-b: 339) in 1778. Engravings found in Jacquin's *Icones Plantarum Rariorum* were executed by J. Adams based on drawings made by J. Hofbauer, Franz Bauer, Ferdinand Bauer, and J. Scharf (Johnston, 1992: 505).

HELICHRYSUM OBCONICUM DC., Prodr. 6: 181, 1838 (Asteraceae).

Sydney Parkinson (1768, watercolour housed at the Natural History Museum, London). Text on watercolour: "Gnaphalium crassifolium. Linn."; "Sydney Parkinson pinxt 1768"; "T. 27. Madeira." Coloured engraving of watercolour executed by G. Smith and published by Banks *et al.* (1985: 393). Watercolour reproduced by Edwards (1983: 49).

Note: Madeiran endemic. The watercolour was made during the first voyage of Captain James Cook and was based on material collected in Madeira in 1768.

HELMINTHOTHECA ECHIOIDES (L.) HOLUB., Folia Geobot. Phytotax. 8(2): 176, 1973 = *Picris echioides* L., Sp. Pl. 2: 792, 1753 (Asteraceae).

Feuillée (1724: [plate] **5**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 116). Text on painting: "*hieracium Echioides foliis tuberculorum respersis accuminibus accutissimis*."

Note: Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724. It is likely that this is native species in the Canary Islands.

HIBISCUS AFF. MUTABILIS L., Sp. Pl. 2: 694, 1753 (Malvaceae).

Baudin (1796-1798: [plate with printed number] **45**, unsigned watercolour). Painting reproduced by Herrera Piqué (2006-a: 287) and Jangoux (2009: 153). Text on watercolour: *"hibiscus Mutabilis.*/. Lin./."

Ledru (1797: [plate without number] **11**, unsigned watercolour). Text on painting: *"Hibiscus Mutabilis.* Lin."

Note: These two illustrations are part of manuscripts located in the Muséum National d'Histoire Naturelle, Paris. The watercolours of this cultivated species are very similar and it is likely that were made by the Spanish artist A. González during a four month stay in Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists.

HOLCUS CF. LANATUS L., Sp. Pl. 2: 1048, 1753 (Poaceae).

George Forster (unknown date, watercolour housed at the Natural History Museum, London). Text on watercolour: "274"; "*Holcus purpureus*."; Madeira"; "2." It was not reported by Forster (1789).

Note: The watercolour was made during the second voyage of Captain James Cook. It was based on material collected in Madeira in 1772. It is likely that this is a native species in this island.

HYOSCYAMUS ALBUS L., Sp. Pl. 1: 180, 1753 (Solanaceae).

Feuillée (1724: [plate] **3**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 100). Text on painting: "*hyosciamus Creticus*."

Note: Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724. It is likely that this is a native species in these islands.

HYPERICUM CANARIENSE L., Sp. Pl. 2: 784, 1753 (Hypericaceae).

Plukenet (1694: **TAB. CCCII, Fig. 1**, uncoloured engraving. Engraving was executed by I. Savage).

Reproduction of engraving published by Francisco-Ortega & Santos-Guerra (1999: 259). Text in Plukenet (1696: 189): "*Hypericum, s. Androsaemum magnum Canariense* [...]."

- Unknown artist (unknown date between 1686 and 1700: *Moninckx Atlas*, vol. 4: [plate without number] 15, watercolour housed at the Bibliotheek van de Universiteit van Amsterdam) (Fig. 13). Black and white version reproduced by Wijnands (1983: 109). Text in the *Moninckx Atlas: "Hypericum frutescens Canariense* [...]."
- Commelin (1701: **Fig. 68**, unsigned uncoloured engraving). Text in Commelin (1701: 135-136): *"Hypericum frutescens canariense* [...]."
- Sloane [1707: Tab. 4, Fig. 1, unsigned uncoloured engraving. Drawing likely made by E. Kickius and engraving likely executed by M. van der Gucht (Sequeira *et al.*, 2010-a: 599)]. Reproduction of engraving published by Sequeira *et al.* (2010-a: 604). Text in Sloane (1696: 86; 1707: 18): "Cistus folio oblongo, integro [...] In insula Madera [...]."

Note: This is a Macaronesian endemic, occurring on the Canary Islands and Madeira. The illustrations are for plants from the Canaries, with the exception of the engraving published by Sloane that is for Madeiran material studied during his visit to this island in 1687. The painting from the *Moninckx Atlas* was used to execute Commelin's engraving and material cultivated in the Botanic Garden of Amsterdam is thus depicted in these two illustrations.

HYPERICUM FOLIOSUM AITON, Hort. Kew. 3: 104, 1789.

Jacquin (1798: **T. 299**, unsigned coloured engraving). Text in Jacquin (1798: 27). **Note:** This species is endemic in the Azores where it occurs on all islands. The illustration was based on material grown in the imperial Gardens of Schönbrunn, Austria. The plates of Jacquin's *Plantarum Rariorum Horti Caesarei Schoenbrunnensis* were engraved by J. Scharf and M. Sedelmayer (Stearn *et al.*, 1990: 105).

HYPERICUM GLANDULOSUM AITON, Hort. Kew. 3: 107, 1789.

Sloane [1707: Tab. 4, Fig. 1, unsigned uncoloured engraving. Drawing likely made by E. Kickius and engraving likely executed by M. van der Gucht (Sequeira at al., 2010-a: 599)]. Reproduction of engraving published by Sequeira *et al.* (2010-a: 604).

Note: This is a Macaronesian endemic, occurring on the Canary Islands and Madeira. Sloane's illustration was based on material collected during his visit to Madeira in 1687.

HYPERICUM GRANDIFOLIUM CHOISY, Prodr. Monogr. Hypéric.: 38, 1821.

- Feuillée (1724: [plate] **40**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 313). Text on painting: *"hypericum amplissimis foliis."*
- Baudin (1796-1798: [plate with printed number] 53, unsigned watercolour). Painting reproduced by Herrera Piqué (2006-a: 287) and Jangoux (2009: 154). Text on watercolour: "hypericum Canariense./. Lin./."
- Ledru (1797: [plate without number] **12**, unsigned watercolour). Text on painting: *"Hypericum Canariense*. Lin:"



Figure 13.- Watercolour of the Macaronesian endemic Hypericum canariense L. (Hypericaceae) located at the Moninckx Atlas (vol. 4: [plate without number] 15) made by an unknown artist. Unknown date between 1686 and 1700. Image copyright of the Bibliotheek van de Universiteit van Amsterdam. **Note:** This is a Macaronesian endemic occurring on the Canary Islands and Madeira. Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724. The Baudin and Ledru illustrations are located in the Muséum National d'Histoire Naturelle, Paris. The watercolours are very similar and it is likely that were made by the Spanish artist A. González during a four month stay in Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists.

ILEX CANARIENSIS POIR., Encycl. Suppl. 3: 67, 1813 (Aquifoliaceae).

Sydney Parkinson (1768, watercolour housed at the Natural History Museum, London). Text on watercolour: "*Ilex* Azevinho."; "Sydney Parkinson pinxt 1768."

Note: This is a Macaronesian endemic, distributed on the Canary Islands and Madeira. The watercolour was made during the first voyage of Captain James Cook. It was based on material collected in Madeira in 1768.

ILEX PERADO AITON, Hort. Kew. 1: 169, 1789 SSP. PERADO.

Sydney Parkinson (1768, watercolour housed at the Natural History Museum, London). Text on watercolour: "*Ilex Perado*."; "Sydney Parkinson pinxt 1768."

Note: This taxon is endemic to Madeira. The watercolour was made during the first voyage of Captain James Cook. It was based on material collected in Madeira in 1768.

ILEX PERADO SSP. *PLATYPHYLLA* (WEBB & BERTHEL.) TUTIN, J. Bot. 71: 100, 1933 ≡ *Ilex platy-phylla* Webb & Berthel., Hist. Nat. Iles Canaries Phytogr. 2: 135, 1842.

- Plukenet (1694: **TAB. CCLXII, Fig. 1**, unsigned uncoloured engraving). Text in Plukenet (1696: 38; 1700: 18): "*Aquifolium amplissimis foliis Minus corrugatum ex Insulis Fortunatis.*"
- Baudin (1796-1798: **58**, unsigned watercolour, watercolour housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Jangoux (2009: 157). Text on watercolour: "*Laurus ilicifolius.*."

Note: This taxon is endemic to the Canary Islands and occurs on La Gomera, La Palma, and Tenerife. It is likely that the illustration found in Baudin's manuscript was made by the Spanish artist A. González during a four month stay in Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists.

IPOMOEA CAIRICA (L.) SWEET, Hort. Brit. 2: 287, 1826 = *Convolvulus cairicus* L., Syst. Nat., ed. 10 2: 922, 1759 (Convolvulaceae).

George Forster (unknown date, watercolour and uncoloured engraving are housed at the Natural History Museum, London). Text on watercolour: "46"; "*Convolvulus acuminatus*."; "*mucronatus*. Pl. Atlant. in Commentat. Gotting. 9. p. 52. n. 35"; "S^t. Jago"; "I. 13."; "Ge. Forster." Reported for Santiago Island (Cape Verde Islands) as *C. mucronatus* by Forster (1789: 52).

Note: The watercolour was made during the second voyage of Captain James Cook and was based on material collected in the Cape Verde Islands in 1772. It is introduced in the Cape Verdes.

ISOPLEXIS CANARIENSIS (L.) J. W. LOUDON, Encycl. Pl.: 528, 1829 ≡ *Digitalis canariensis* L., Sp. Pl. 2: 622, 1753 (Plantaginaceae).

- Plukenet (1694: TAB. CCCXXV, Fig. 2, unsigned uncoloured engraving). Reproduction of engraving published by Francisco-Ortega *et al.* (1994: 10). Text in Plukenet (1696: 400): "*Digitali affinis Canariensis* [...]."
- Jan Moninckx (unknown date between 1686 and 1700: *Moninckx Atlas*, vol. 3: [plate without number] 51, watercolour housed at the Bibliotheek van de Universiteit van Amsterdam). Black and white version reproduced by Wijnands (1983: 187). Watercolour reproduced by Francisco-Ortega *et al.* (2011: 108). Text in watercolour: "J. M. F." Text in the *Moninckx Atlas*: "*Digitalis Acanthoides Canariensis* [...]."
- Commelin (1701: **Fig. 53**, unsigned uncoloured engraving). Text in Commelin (1701: 105-106): "*Digitalis acanthoides canariensis* [...]."

Note: This is a Canary Island endemic, occurring on La Gomera, La Palma, and Tenerife. The painting from the *Moninckx Atlas* was used to execute Commelin's engraving and material cultivated in the Botanic Garden of Amsterdam is depicted in these two illustrations.

ISOPLEXIS SCEPTRUM (L. F.) J. W. LOUDON, Encycl. Pl.: 528, 1829 = *Digitalis sceptrum* L. f., Suppl. Pl.: 282, 1782.

L'Héritier (1792-a: [plate] **24**, uncoloured engraving. Drawing made by P. J. Redouté and engraving executed by C. Milsan). Illustration reproduced by L'Héritier (1963: [plate] 24). Text in L'Héritier (1789: 21): "*Digitalis sceptrum*."

Note: Madeiran endemic. The illustration was based on material collected in Madeira by Masson (L'Héritier, 1789: 21) between 1776 and 1779.

IXANTHUS VISCOSUS (AITON) GRISEB., Gen. Sp. Gent.: 129, $1839 \equiv Gentiana viscosa$ Aiton, Hort. Kew. 1: 321, $1789 \equiv Exacum viscosum$ (Aiton) Sm., Icon. Pict. Pl. Rar.: 18, 1793 (Gentianaceae).

Smith [1793: [plate] **F18**, unsigned coloured engraving. Engraving likely executed by J. E. Sowerby (Johnston, 1992: 561-562)]. Text with new combination (i.e., *E. viscosum*) and species description found in Smith (1793: 18).

Note: This species is endemic in the Canary Islands and is found on all islands except Fuerteventura and Lanzarote. The illustration was based on material cultivated at the garden of Thomas Sikes at Hackney, London (Smith, 1793: 18).

JASMINUM AZORICUM L., Sp. Pl. 1: 7, 1753 (Oleaceae).

- Plukenet (1694: TAB CCCIII, Fig: 1, uncoloured engraving. Engraving executed by M. Vander Gucht; 1705: CCCCXXIII, Fig. 6, uncoloured engraving was made by T. Simon). Text in Plukenet (1696: 195; 1705: 123): "Jasminum album [...] ex Insula Maderensi [...] & Jasminum Azoricum trifoliatum lucidum [...]."
- Jan Moninckx (unknown date between 1686 and 1690: *Moninckx Atlas*, vol. 2: [plate without number] 18, watercolour housed at the Bibliotheek van de Universiteit van Amsterdam). Black and white version reproduced by Wijnands (1983: 156). Text on watercolour: "Jajan Moninckx." Text in the *Moninckx Atlas*: "*Jasminum Azoricum trifoliatum* [...]."

Commelin (1697: **Fig. 82**, unsigned uncoloured engraving). Text in Commelin (1701: 159-160): "*Jasminum azoricum trifoliatum* [...]."

Note: This is a Madeiran endemic. There has been confusion regarding the geographical distribution and cultivation history of this species (De Juana, 2013). For instance, in his original description, Linnaeus (1738: 5, 1753: 7) considered *J. azoricum* to be found in Azores, Madeira, and India. Linnaeus also indicated that the polynomial name *Jasiminum Limonii folio conjugato* and its attached illustration published by Burman (1736: 128-129; Tab. 59) was a synonym of *J. azoricum*. Burman's name has been identified as *Nyctanthes sambac* L. (Oleaceae) (accepted name *Jasiminum sambac* (L.) Aiton) from Sri Lanka by Lourteig (1966: 26). The painting from the *Moninckx Atlas* was used to execute Commelin's engraving and material cultivated in the Botanic Garden of Amsterdam is thus depicted in these two illustrations.

JASMINUM ODORATISSIMUM L., Sp. Pl. 1: 7, 1753.

- Besler [1613a: [plate] 277, II, unsigned coloured engraving. Claims that all the drawings in this work were made by Besler are controversial (Johnston, 1992: 146)]. Text on engraving: "Jasminum flor. lut." There are coloured and uncoloured versions of this illustration. Text in Besler (1613a: opp. plate 277): "Iasminum uel Gelseminum flore luteo [...]."
- Munting (1696: Fig. 55, Fol. 224, unsigned coloured engraving). Text on engraving: *"Iasminum semper virens americanum.*" Text in Munting (1696: 224-225): *"Het Jasminum semper virens Americanum flore luteo odorato* [...]."
- Barrelier (1714: [plate (unnumbered)] 16, **62**, unsigned uncoloured engraving). Text on engraving: "*Gelseminum trifolium, odoratissimum* [...]." Text in Barrelier (1714: 123): "*Jasminum flavum, odoratum* [...]."
- Weinmann (1742: N. 602, c, unsigned coloured engraving). Text on engraving: "Jasminum odoratum flavum." Text in Weinmann (1742: 162-163): "Jasminum odoratum flavum [...]."
- Curtis (1794-b: N° 285, coloured engraving. Drawing by S. Edwards and engraving by F. Sansom). Engraving reproduced by Anonymous (2002: 15). Text in Curtis (1794-b: 218): "*Jasminum Odoratissimum*. Sweetest Jasmine."

Note: This is a Macaronesian endemic occurring on the Canary Islands and Madeira. Barrelier's engraving was based on plants recorded in Italy, France, and/or Spain, and Linnaeus (1738: 6) suggested that this illustration was for *J. odoratissimum*. Besler's coloured drawing depicts one individual grown in the gardens of the Prince Bishop of Eichstätt in Bavaria, Germany. His work has been called "the massiest of herbals" (Johnston, 1992: 146), and at least six engravers were engaged in producing the 374 plates that compose this two volume book (Blunt 1951: 95). Besler (2007: plate 43) indicated that his engraving was for *J. odoratissimum* or for the Mediterranean *J. fruticans* L. Boerhaave (1720: 216) assigned Munting's engraving to *J. odoratissimum*. Munting's illustration was likely based on material cultivated in the botanic garden of his family known as the 'Paradise of Groningen' (Keeler, 2009: 31). Plates found in Weinmann's *Phytanthoza iconographia* were engraved by J. J. Haid, J. E. Ridinger, and J. Seuter. These engravings were based on the drawings made by G. D. Ehter, N. Asami, and others (Johnston, 1992: 358). With the exception of that of Cur-

272 FRANCISCO-ORTEGA et al.

tis (1794), none of the illustrations and associated descriptions list the Macaronesian Islands as a distribution area for this species. Curtis's engraving depicts a plant cultivated in Britain and Curtis (1794-b: 218) reported that the species was introduced into the United Kingdom from Madeira by P. Miller in 1730.

JATROPHA CURCAS L., Sp. Pl. 2: 1006, 1753 (Euphorbiaceae).

George Forster (unknown date, watercolour housed at the Natural History Museum, London). Text on watercolour: "261"; "Jatropha gynandra."; "Curcas? Pl. Atlant. in Commentat. Gotting. 9. p. 70. n. 148"; "St. Jago"; "I. 11."; "FG"; "Ge. Forster." Reported for Madeira as "Iatropha curcas?" by Forster (1789: 70).

Note: The watercolour of this cultivated species was made during the second voyage of Captain James Cook and was based on material collected in the Cape Verde Islands in 1772.

JUSTICIA HYSSOPIFOLIA L., Sp. Pl. 1: 15, 1753 (Acanthaceae).

- Plukenet (1694: **TAB CCLXXX, Fig: 1**, uncoloured engraving. Engraving executed by M. Vander Gucht; **CCCXIII, Fig. 1**, unsigned uncoloured engraving). Text in Plukenet (1696: 44): "Arbuscula Canariensis Salicis, aut potius [...] & Ecbolii Indici, s. Adhatodae cucullatis floribus aemula, Hyssopifolia, Planta ex Insulis Fortunatis."
- Maria Moninckx (unknown date between 1686 and 1706: *Moninckx Atlas*, vol. 8: [plate without number] **38**, watercolour housed at the Bibliotheek van de Universiteit van Amsterdam). Watercolour reproduced by Francisco-Ortega *et al.* (2012: 126). Text on watercolour: "Maria Moninckx. F."

Note: This is a Canary Island endemic, distributed on La Gomera and Tenerife. The watercolour from the Moninckx Atlas was based on material cultivated in the Botanic Garden of Amsterdam.

KICKXIA SPURIA (L.) DUMORT. SSP. *INTEGRIFOLIA* (BROT.) R. FERN., Bot. J. Linn. Soc. 64: 74, $1971 \equiv Antirrhinum spurium$ L. var. *integrifolium* Brot., Phytogr. Lusit. Select. 2: 119, 1827 (Scrophulariaceae).

- Sydney Parkinson (1768, watercolour housed at the Natural History Museum, London). Text on watercolour: "*Antirrhinum cordatum*"; "Sydney Parkinson pinxt 1768." Coloured engraving of watercolour executed by G. Sibelius and reproduced by Banks *et al.* (1985: 397).
- George Forster (1772-1773, watercolour housed at the Natural History Museum, London) (Fig. 14). Text on watercolour: "261"; "*Antirrhinum elegans* Pl. Atlant. in Commentat. Gotting. 9. p. 60. n. 97."; "FG"; "sketched Aug, 2^d: 1772"; "painted. Feb.^r 17th: 1773." Mistakenly reported for the Cape Verdes as "*Antirrhinum spurium*" by Forster (1789: 60).

Note: Parkinson's watercolour was made during the first voyage of Captain James Cook and was based on material collected in Madeira in 1768. Forster's watercolour was painted during the second voyage of Captain James Cook and depicts plant material collected in Madeira in 1772 although Forster's label erroneously assigned the painting to the Cape Verde Island endemic *K. elegans* (G. Forst.) D. A. Sutton. This is a Madeiran native species.

$SCIENTIFIC ILLUSTRATIONS \ OF \ THE \ MACARONESIAN \ FLORA \qquad 273$



Figure 14.- Watercolour of the Madeiran native *Kickxia spuria* (L.) Dumort. ssp. *integrifolia* (Brot.) R. Fern (Scrophulariaceae) made by George Forster (sketched on August 2, 1772, painted on February 17, 1773), based on material found in Madeira during the second voyage of Captain Cook. Forster's label of this painting mistakenly assigned this species to the Cape Verde Island endemic *K. elegans* (G. Forst.) D. A. Sutton. Image copyright of the Natural Museum of London.

KLEINIA NERIIFOLIA HAW., Syn. Pl. Succ. 312, 1812 = *Cacalia kleinia* L., Sp. Pl. 2: 834, 1753 (Asteraceae).

- Clusius (1605: 7, unsigned uncoloured woodcut). Text in Clusius (1605: 6-7): "Planta Lavendulae folio."
- Plukenet (1694: TAB. CCCIV, Fig: 3, uncoloured engraving. Engraving executed by M. Vander Gucht). Text in Plukenet (1696: 223; 1700: 118): "Linariae similis Arbuscula Canariensis [...]."
- Dillenius [1732: T. LIV, F. 62, unsigned uncoloured engraving. Drawing and engraving made by Dillenius (Stevenson, 1961: 375)]. Text in Dillenius (1732: 61-62): "Cacalianthemum folio nerii glauco [...] Plukenetius Phyt. Tab. 304. f. 3. [...] Lineare simile Arbusculam Canariense [...]."
- De Candolle (1799-b: [plate] **12**, coloured engraving. Drawing and engraving were made by P. J. Redouté). Text on engraving: "*Cacalia. kleinia*. Cacalie de klein." Text in De Candolle (1799-b: unnumbered page associated to plate 12): "*Cacalia kleinia* [...] Elle est originarie des îles Canaries, et peut-être de l'Inde [...]."

Note: Canary Island endemic, found on all islands. Linnaeus (1753: 834) indicated that the illustration of Clusius referred to this species; however, the description provided by Clusius (1605: 7) does not mention the Canaries but rather "*provincia Orientalis Indiae*." Dillenius' engraving depicts a plant that was cultivated in James Sherard's Garden at Eltham, England.

LAVANDULA BUCHII WEBB & BERTHEL., Hist. Nat. Iles Canaries Phytogr. 3: 58, 1844 (Lamiaceae).

- Plukenet (1694: TAB CCCIII, Fig: 5, uncoloured engraving. Engraving executed by M. Vander Gucht). Text in Plukenet (1696: 209): "Lavandula maritima Canariensis [...]."
- Note: Tenerife endemic.

LAVANDULA CANARIENSIS MILL., Gard. Dict., ed. 8.: n. 4, 1768.

- Jan Moninckx (unknown date between 1703 and 1705: *Moninckx Atlas*, **vol. 6**: [plate without number] **43**, watercolour housed at the Bibliotheek van de Universiteit van Amsterdam). Black and white version reproduced by Wijnands (1983: 115). Text on watercolour: "J. Moninckx, F." Text in the *Moninckx Atlas*: "*Lavandula folio longiore tenuis & elegantius dissecto*."
- Commelin (1706: **Fig. 27**, uncoloured engraving. Engraving executed by "P.S." = P. Sluyter). Text in Commelin (1706: 27): "*Lavandula folio longiore tenuis & elegantius*."
- Bonelli [1775: T. III, Tab. 73, unsigned coloured engraving. Engraving likely executed by M. Bouchard and likely painted by C. Ubertini, but see Stevenson (1961: 361) regarding authorship of *Hortus Romanus* illustrations]. Text on engraving: *"Lavandula, latifolia laciniata* [...]." Text in Bonelli (1775: 14): *"Lavandula, latifolia laciniata* [...]."
- Wendland (1789: [plate] **139**, watercolour painted by Wendland and included in a manuscript housed at the Gottfried Wilhelm Leibniz Bibliothek Niedersächsische Landesbibliothek, Germany). Text on watercolour: *"Lavandula speciosa."*

Note: This is a Canary Island endemic species (with six subspecies) that is found on all islands. The painting from the *Moninckx Atlas* was used to execute Commelin's engraving and material cultivated in the Botanic Garden of Amsterdam is depicted in both illustrations. Wendland's watercolour was based on material cultivated in the Herrenhausen Gardens, Hanover, Germany. The plant depicted in Bonelli's *Hortus Romanus* came from Italian gardens, very likely from Rome. It seems that Bonelli was only responsible for Volume 1 of *Hortus Romanus* (year 1772), the rest of the volumes were prepared by N. Martelli (Stevenson, 1961: 360).

LAVANDULA PINNATA L. F., De Lavandula: 11, 1780.

- Sydney Parkinson & unknown artist (unknown date, watercolour housed at the Natural History Museum, London, original sketch made by Parkinson, colouring executed by an unknown author). Text on watercolour: "*Lavandula pinnata*" (recto) and "*Madeira*" (verso).
- Jacquin (1781-a: [plate] **106**, unsigned coloured engraving). Text in Jacquin (1781-1787: 11).
- Curtis (1798-a: **N 401**, unsigned coloured engraving). Engraving reproduced by Anonymous (2002: 25). Text in Curtis (1798-a: 401): "*Lavandula pinnata*. Pinnated Lavander."

Note: A Macaronesian endemic, occurring on the Canary Islands and Madeira. Parkinson's painting was made during the first voyage of Captain James Cook and was based on material collected in Madeira in 1768. Engravings found in Jacquin's *Icones Plantarum Rariorum* were executed by J. Adams based on drawings made by J. Hofbauer, Franz Bauer, Ferdinand Bauer, and J. Scharf (Johnston, 1992: 505). Curtis' illustration was based on material from Madeira cultivated in England where the species was originally introduced by Masson in 1777 (Curtis, 1798-a: 401). Most of the plates of *Curtis's Botanical Magazine* published during the 18th century were drawn by S. Edwards and engraved by F. Sansom (Blunt, 1951: 186).

LAVANDULA VIRIDIS L'HÉR., Sert. Angl.: 19, 1789.

L'Héritier (1792-a: [plate] **21**, uncoloured engraving. Drawing made by P. J. Redouté and engraving executed by F. Hubert). Illustration reproduced by L'Héritier (1963: [plate] 21).

Note: The illustration was based on material collected in Madeira by Masson (L'Héritier, 1789: 19) between 1776 and 1779. This species is a Madeiran native.

LEPIDIUM LATIFOLIUM L., Sp. Pl. 2: 644, 1753 (Brassicaceae).

Feuillée (1724: [plate] **27**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 254). Text on painting: "*Tanacetum Indicum foliis crispis*."

Note: This is a cultivated species with medicinal use. Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724. *LETHARIELLA CANARIENSIS* (ACH.) KROG, Norw. J. Bot. 23: 91, 1976 ≡ *Alectoria canariensis* Ach., Lich. Univ.: 597, 1810 (Parmeliaceae).

Plukenet (1694: TAB. CCCIX, Fig: 1, uncoloured engraving. Engraving executed by M. Vander Gucht). Text in Plukenet (1696: 254; 1700: 132): "Muscus arboreus aurantiacus [...] ex Insulis Fortunatis."

Note: The engraving of this lichen species was based on Canary Islands material. It is considered a native species in the Canaries.

LOTUS GLAUCUS AITON, Hort. Kew. 3: 92, 1789 (Fabaceae).

Sydney Parkinson (1768, watercolour housed at the Natural History Museum, London). Text on watercolour: "*Lotus glaucus*."; "Sydney Parkinson pinxt 1768."; "T. 31 Madeira." Coloured engraving of watercolour executed by D. Mackenzie and published by Banks *et al.* (1985: 391). Watercolour reproduced by Edwards (1983: 47).

Note: This is a Madeiran endemic. The watercolour was made during the first voyage of Captain James Cook and was based on material collected in Madeira in 1768.

LOTUS JACOBAEUS L., Sp. Pl. 2: 775, 1753.

- Jan Moninckx (1699: Moninckx Atlas, vol. 3: [plate without number] 3, watercolour housed at the Bibliotheek van de Universiteit van Amsterdam). Black and white version reproduced by Wijnands (1983: 165). Watercolour reproduced by Romeiras et al. (2014: 631). Text on watercolour: "Jan. Moninckx. F." Text in the Moninckx Atlas: "Lotus Angustifolia Flore luteo purpurascente Insulae Sancti Jacobi."
- Commelin (1701: **Fig. 83**, unsigned uncoloured engraving). Text in Commelin (1701: 165-166): "*Lotus angustifolia flore luteo purpurascente insulæ sancti jacobi.*"
- Wendland (1789: [plate] **141**, watercolour painted by Wendland and included in a manuscript housed at the Gottfried Wilhelm Leibniz Bibliothek Niedersächsische Landesbibliothek, Germany). Text on watercolour: "*Lotus jacobaeus* L."
- Curtis (1790-b: [plate] **79**, unsigned coloured engraving) (Fig. 4). Text in Curtis (1790b: 79): "*Lotus Jacobaeus*. Black-flower'd Lotus."

Note: This is a Cape Verde endemic, occurring on Fogo and Santiago islands. The painting from the *Moninckx Atlas* was used to execute Commelin's engraving and material cultivated in the Botanic Garden of Amsterdam is thus depicted in both illustrations. The species was introduced into cultivation in Holland by W. A. van der Stel (Governor of the Cape Colony, South Africa) in 1699 (Commelin, 1701: 165-166). Wendland's watercolour was based on material cultivated in the Herrenhausen Gardens, Hanover, Germany. Curtis's engraving was based on material cultivated in England. Most of the plates of *Curtis's Botanical Magazine* published during the 18th century were drawn by S. Edwards and engraved by F. Sansom (Blunt, 1951: 186).

LYTHRUM JUNCEUM BANKS & SOL., Nat. Hist. Aleppo ed. 2, 2: 253, 1794 (Lythraceae).

Sydney Parkinson & Thomas Burgis (1776, watercolour housed at the Natural History Museum, London, original sketch by Parkinson, colouring made by T. Burgi). Text on watercolour: "Thos. Burgis Pinxt. 1776." Coloured engraving of watercolour executed by D. Mackenzie and published by Banks *et al.* (1985: 392). Watercolour reproduced by Edwards (1983: 48).

Note: The watercolour of this Madeiran native species was made during the first voyage of Captain James Cook and was based on material collected in Madeira in 1768.

MELISSA OFFICINALIS L., Sp. Pl. 2: 592, 1753 (Lamiaceae).

Feuillée (1724: [plate] **30**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 265). Text on painting: "*Melissa Tenerifera foliis exiguis*."

Note: Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724. *Melissa officinalis* is introduced in the Canaries.

MENTHA SUAVEOLENS EHRH., Beitr. Naturk. 7: 149, 1792 (Lamiaceae).

George Forster (1772, watercolour housed at the Gotha Library, University of Erfurt, Turingia, Germany) (Fig. 15). Text on watercolour: "76"; "*Mentha rotundifolia?* Linn."; "G. Forster ad viv. del. 3.^t Aug. 1772." Reported for Madeira by Forster (1789: 58).

Note: The watercolour of this Madeiran native was made during the second voyage of Captain James Cook and was based on material collected in Madeira in 1772.

MISOPATES ORONTIUM (L.) RAF., Autik. Bot.: 158, $1840 \equiv Antirrhinum orontium$ L., Sp. Pl. 2: 617, 1753 (Plantaginaceae).

Feuillée (1724: [plate] **6**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 119). Text on painting: "*Antirrinum Teneriferum augusto et Longiore folio*."

Note: Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724. It is likely that this is a native species in the Canary Islands.

MONANTHES BRACHYCAULOS (WEBB & BERTHEL.) R. LOWE, Fl. Salvag. Tent.: 12, $1869 \equiv$ *Petrophyes brachycaulos* Webb & Berthel., Hist. Nat. Iles Canaries Phytogr. 1: 202, 1841 [as "*brachychaulon*"] (Crassulaceae).

- Baudin (1796-1798: [plate with printed number] **66**, unsigned watercolour). Painting reproduced by Jangoux (2009: 161). Text on watercolour: "*Sempervivum.*/. Lin./."
- Ledru (1797: [plate without number] **15**, unsigned watercolour). Text on painting: "Sempervivum."

Note: This is a Canary Island endemic (Gran Canaria and Tenerife). These two illustrations are located in the Muséum National d'Histoire Naturelle, Paris. The watercolours are very similar and it is likely that were made by the Spanish artist A. González during a four month stay in Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists.

MONANTHES POLYPHYLLA HAW., Revis. Pl. Succ.: 68, 1821 = *Sempervivum monanthes* Aiton, Hort. Kew. 2: 149, 1789.

278 FRANCISCO-ORTEGA et al.



Figure 15.- Watercolour of the Madeiran native *Mentha suaveolens* Ehrh. (Lamiaceae) made by George Forster (sketched on August 3, 1772, painted on February 28, 1773), based on material found in Madeira during the second voyage of Captain Cook. Image copyright of the Gotha Library, University of Erfurt, Turingia, Germany.

Curtis (1790-c: N° 93, unsigned coloured engraving). Engraving reproduced by Anonymous (2002: 11). Text in Curtis (1790-c: 93): "Sempervivum Monanthes. Dwarf Houseleek."

Note: This is a Canary Island endemic distributed on La Gomera, Gran Canaria, La Palma, and Tenerife. The engraving was based on material cultivated in England where the species was originally introduced by Masson in 1777 (Curtis, 1790-c: 93). Most of the plates of *Curtis's Botanical Magazine* published during the 18th century were drawn by S. Edwards and engraved by F. Sansom (Blunt, 1951: 186).

MUSSCHIA AUREA (L. F.) DUMORT, Comment. Bot.: 28, $1822 \equiv Campanula aurea$ L. f., Suppl. Pl.: 141, 1782 (Campanulaceae).

Francis Masson (1784, watercolour housed at the Natural History Museum, London). Painting reproduced by Francisco-Ortega *et al.* (2009: 7). Text on watercolour: *"Campanula aurea* Madera 1784 Fr. Masson."

Note: This is a Madeiran endemic. The painting was based on material collected by Masson during his second visit to this island in 1784. There are two copies of this watercolour at the Natural History Museum, London.

OCOTEA FOETENS (AITON) BAILL., Hist. Pl. 2: 466, $1870 \equiv Laurus$ foetens Aiton, Hort. Kew. 2: 39, 1789 (Lauraceae).

Sydney Parkinson (1768, watercolour housed at the Natural History Museum, London). Text on watercolour: "*Laurus foetens*"; "S. Parkinson pinxt. 1768."; "T. 38. Madeira." Coloured engraving of watercolour executed by D. Mackenzie and published by Banks *et al.* (1985: 400). Watercolour reproduced by Edwards (1983: 55).

Note: This is a Macaronesian endemic found on the Canary Islands and Madeira and also in the Azores where it is; however, not native. The watercolour was made during the first voyage of Captain James Cook and was based on material collected in Madeira in 1768. This species was among the first Macaronesian species to be depicted [by L. Torriani in the late 16th century (see above) (Cioranescu, 1999: 16-19)], and it is considered that the legendary rain tree or "Garoé" found on the island of El Hierro was a specimen of *O. foetens* (Gioda *et al.*, 1995). For a review on iconography of the Garoé see Hernández Gutiérrez (1998) and Barrios García (2010, 2012-b).

ORIGANUM VULGARE L. SSP. *VIRENS* (HOFFMANNS. & LINK) IETSW., Leiden Bot. Ser. 4: 115, 1980 ≡ *Origanum virens* Hoffmanns. & Link, Fl. Portug. 1: 119, 1809 (Lamiaceae).

- Sloane [1707: Tab. 3, Fig. 4, unsigned uncoloured engraving. Drawing likely made by E. Kickius and engraving likely executed by M. van der Gucht (Sequeira *et al.*, 2010-a: 599)]. Reproduction of engraving published by Sequeira *et al.* (2010-a: 602). Text in Sloane (1696: 65; 1707: 17): "Origanum spicis latioribus. In Insula Madera sponte proveniebat prope urbem Funchall."
- George Forster (1772-1773, watercolour housed at the Gotha Library, University of Erfurt, Turingia, Germany). Text on watercolour: "64"; "Origanum quadrangulare."; "FJ. sketched Aug. 1772. painted March 4th. 1773."; "I. 7." Reported for Madeira as O. creticum by Forster (1789: 59).

Note: Sloane's illustration was based on plants collected during his visit to this island in 1687. Forster's watercolour was painted during the second voyage of Captain James Cook, and it depicts material collected in Madeira in 1772. This is a native species in Madeira.

Oxalis corniculata L., Sp. Pl. 1: 435, 1753 (Oxalidaceae).

Feuillée (1724: [plate] **31**, unsigned achromatic watercolour, part of manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 274). Text on painting: "Oxis Canariensis trifolia, Corniculata, flore purpurascente."

Note: Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724. It is likely that this is a native species in the Canary Islands.

PELARGONIUM INQUINANS (L.) L'HÉR. IN AITON, Hort. Kew., 2: 424, $1789 \equiv Geranium inquinans L., Sp. Pl. 2: 676, 1753 (Geraniaceae).$

Baudin (1796-1798: [plate with printed number] **54**, unsigned watercolour as part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-a: 285) and Jangoux (2009: 155). Text on watercolour: "*geranium*."

Note: It is likely that the watercolour of this cultivated species was made by the Spanish artist A. González during a four month stay in Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists.

PERICALLIS AURITA (L'HÉR.) B. NORD., Opera Bot. 44: 20, 1978 ≡ *Cineraria aurita* L'Hér., Sert. Angl.: 26, 1789 (Asteraceae).

L'Héritier (1792-b: [plate] **31**, uncoloured engraving. Drawing made by P. J. Redouté and engraving executed by F. Hubert). Illustration reproduced by L'Héritier (1963: [plate] 31).

Note: Madeiran endemic. The illustration was based on material collected in this island by Masson (L'Héritier, 1789: 26) between 1776 and 1779.

PERICALLIS CRUENTA (L'HÉR.) BOLLE, Bonplandia 8: 133, 1860 ≡ *Cineraria cruenta* L'Hér., Sert. Angl.: 26, 1789.

- L'Héritier (1792-b: [plate] **33**, uncoloured engraving. Drawing made by P. J. Redouté and engraving executed by P. Maleure). Illustration reproduced by L'Héritier (1792-b: [plate] 33) and Herrera Piqué (1987: 82).
- Curtis (1798-b: **N 406**, unsigned coloured engraving). Engraving reproduced by Anonymous (2002: 19). Text in Curtis (1798-b: 406): "*Cineraria Cruenta*. Purple-Leaved Cineraria."

Note: The species is endemic to Tenerife. The illustrations were based on material collected in Tenerife by Masson (L'Héritier, 1789: 26; Curtis, 1798-b: 406) in 1778. Curtis (1798-b: 406) mistakenly suggested that Masson visited the Canaries in 1777. L'Héritier (1789: 26) indicated that Masson's collections came from Tenerife where this species is endemic. Curtis's illustration was made from plants cultivated in Britain. Most of the plates of *Curtis's*

Botanical Magazine published during the 18th century were drawn by S. Edwards and engraved by F. Sansom (Blunt, 1951: 186).

PERICALLIS LANATA (L'HÉR.) B. NORD., Opera Bot. 44: 20, 1978 ≡ *Cineraria lanata* L'Hér., Sert. Angl.: 25, 1789.

- L'Héritier (1792-b: [plate] **30**, uncoloured engraving. Drawing made by P. J. Redouté and engraving executed by J. B. Guyard). Illustration reproduced by L'Héritier (1963: [plate] 30) and Herrera Piqué (1987: 82). Species description found in L'Héritier (1789: 25).
- Wendland (1789: [plate] **30**, watercolour painted by Wendland and included in a manuscript housed at the Gottfried Wilhelm Leibniz Bibliothek - Niedersächsische Landesbibliothek, Germany). Text on watercolour: "*Cineraria lanata* L'Herit."
- Curtis (1790-a: Nº 53, unsigned coloured engraving). Engraving reproduced by Anonymous (2002: 9). Text in Curtis (1790-a: 53): "*Cineraria Lanata*. Woolly Cineraria."

Note: This is a Tenerife endemic. L'Héritier's illustration was based on material collected in Tenerife by Masson (L'Héritier, 1789: 25) in 1778. Wendland's watercolour was based on material cultivated in the Herrenhausen Gardens, Hanover, Germany. Most of the plates of *Curtis's Botanical Magazine* published during the 18th century were drawn by S. Edwards and engraved by F. Sansom (Blunt, 1951: 186).

PERICALLIS MALVIFOLIA (L'HÉR.) B. NORD., Opera Bot. 44: 20, 1978 SSP. MALVIFOLIA ≡ *Cineraria malvifolia* L'Hér., Sert. Angl.: 26, 1789.

L'Héritier (1792-b: [plate] **32**, uncoloured engraving. Drawing made by P. J. Redouté and engraving executed by F. Hubert). Illustration reproduced by L'Héritier (1963: [plate] 32).

Note: This is an Azorean endemic. The illustration was based on material collected in the island of São Miguel by Masson (L'Héritier, 1789: 26) in 1777.

PERICALLIS TUSSILAGINIS (L'HÉR.) D. DON., Brit. Fl. Gard.: 6, 1834 ≡ Cineraria tussilaginis L'Hér., Sert. Angl.: 26, 1789.

Baudin (1796-1798: [plate with printed number] 76, unsigned watercolour). Painting reproduced by Jangoux (2009: 166). Text on watercolour: "Tusilago Rubra./. Lin./."

Ledru (1797: [plate without number] **10**, unsigned watercolour). Text on painting: *"Tusilago Rubra.* Lin.:"

Note: This is a Canary Island endemic (Gran Canaria and Tenerife). Both illustrations are part of manuscripts located in the Muséum National d'Histoire Naturelle, Paris. The watercolours are very similar and it is likely that were made by the Spanish artist A. González during a four month stay in Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists.

PERIPLOCA LAEVIGATA AITON, Hort. Kew. 1: 301, 1789 = *Periploca punicaefolia* Cav., Icon. 3: 9, 1795 (Apocynaceae).

- Plukenet (1694: TAB. CCLX, Fig. 3; TAB. CCLXI, Fig. 2, unsigned uncoloured engravings). Reproduction of engraving (TAB. CCLX, Fig. 3) published by Francisco-Ortega & Santos-Guerra (1999: 258). Text in Plukenet (1696: 35): "Apocynum arboreum ad Elaeagni [...] Canariense [...] & Apocynum scandens angusto [...] ex Insulis Fortunatis [...]."
 - Cavanilles (1795: **Tab. 217**, uncoloured engraving. Drawing made by A. J. Cavanilles and engraving executed by T. López Enguídanos). Illustration reproduced by Cavanilles (1995: Tab. 217). Text in Cavanilles (1795: 9): "*Periploca punicaefolia* [...] *Habitat in Canariis insulis* [...]."

Note: Illustrations were based on material from the Canary Islands. Cavanilles (1794: 9) reported this species as cultivated in the Royal Botanic Garden of Madrid; therefore we cannot rule out that his illustration depicts plants grown in there. This is a native species in the Canary Islands.

PERSEA INDICA (L.) SPRENG., Syst. Veg. 2: 268, $1825 \equiv Laurus indica$ L., Sp. Pl. 1: 370, 1753 (Lauraceae).

- Aldini (1625: **60**, unsigned uncoloured engraving). Text in Aldini (1625: 61-67): "*De lauro indica*." There is controversy concerning the author of this work as it seems that it was written by Pietro Castelli, the Italian botanist who founded the Botanic Garden of Messina (Johnston, 1992: 158).
- Plukenet (1694: TAB. CCCIV, Fig: 1, uncoloured engraving. Engraving executed by M. Vander Gucht). Text in Plukenet (1696: 210; 1700: 115): "Laurus Indica [...]."
- Barrelier (1714: [plate (unnumbered)] 220, **877**, unsigned uncoloured engraving). Text in Barrelier (1714: 123): *"Laurus Latifolia, Indica* [...]."
- Seba (1735: **t. 84, f. 6**, unsigned coloured engraving). Text in Seba (1735: 90): *"Cinamomi silvestris americanum."*

Note: This is a Macaronesian endemic that occurs in the Canary Islands, and Madeira and was probably introduced into the Azores for timber. None of the descriptions associated with the illustrations made reference to the Macaronesian Islands; however, Francisco-Ortega *et al.* (1994: 18) found one specimen of *P. indica* in Plukenet's herbarium that matches his illustration. Linnaeus (1738: 154) assigned Aldini's illustration to this species. Likewise Linnaeus (1753: 370) suggested that Barrelier's and Seba's engravings also belong to *Persea indica*. Aldini's illustration is for an individual cultivated in the Farnese Gardens (Rome). Barrelier's engraving was based on plants recorded in Italy, France, and/or Spain.

PHALARIS CANARIENSIS L., Sp. Pl. 1: 54, 1753 (Poaceae).

- Anonymous (1792: [unnumbered plate] **43**, unsigned coloured engraving). Text on engraving: "*Phalaris canariensis* [...]." Text in Anonymous (1792: 7): "*Phalaris canariensis* [...]."
- Oskamp (1796: **Tab: 127**, unsigned coloured engraving). Text on engraving: "Tab: 127."; "*Phalaris Canariensis* L." Text in Oskamp (1796: 28): "Kanarij-zaad-plant [...]"

Note: Oskamp's *Afbeeldingen der Artseny-Gewassen* is often cited under other authors: J. C. Krauss, J. Zorn, and M. Houttuyn (Johnston, 1992: 596). It appears that the illustrations were based on material from the Canary Islands where this species is likely native.

PHYLLIS NOBLA L., Sp. Pl. 1: 232, 1753 (Rubiaceae).

- Dillenius [1732: **T. CCXCIX, F. 386**, unsigned uncoloured engraving. Drawing and engraving made by Dillenius (Stevenson, 1961: 375)]. Text in Dillenius (1732: 405-406): *"Valerianella canariensis frutescens, simpla nobla dicta."*
- Walther [1735: **Tab. VI**, uncoloured engraving. Drawing made by "C.F.S."(= C. F. Schubert) and engraving executed by "J.G.K" (= J. G. Krügner)]. Text in Walther (1735: 11): "*Bupleurioides* [...] *Simpla nobla Canariensis*."
- Bonelli [1780: T. VI, Tab. 20, unsigned coloured engraving. Engraving likely executed by M. Bouchard and likely painted by C. Ubertini, but see Stevenson (1961: 361) regarding authorship of *Hortus Romanus* illustrations] (Fig. 16). Text on engraving: "Bupleroides quae simpla Nobla Canariensum [...]."Text in Bonelli (1780: 1): "Phyllis. Lin. Bupleuroides Boerh. Florem habet [...] Valerianella frutescens Canariensis Simpla Nobla dicta. Dill. H. Elth. [...]."

Note: This is a Macaronesian endemic that occurs in the Canary Islands and Madeira. It appears that the illustrations are based on material from the Canary Islands. Dillenius' engraving depicts one plant that was cultivated in James Sherard's Garden at Eltham, England. Walther's illustration was made using plants cultivated in his garden at Leipzig, Germany. The plant depicted in Bonelli's *Hortus Romanus* came from Italian gardens, very likely from Rome. It seems that Bonelli was only responsible for Volume 1 of *Hortus Romanus* (year 1772), the rest of the volumes were prepared by N. Martelli (Stevenson, 1961: 360).

PIPTATHERUM MILIACEUM (L.) Coss., Notes Pl. Crit.: 129, $1812 \equiv Agrostis \ miliacea \ L., Sp. Pl. 1: 61, 1753 (Poaceae).$

Sloane [1707: Tab. 2, Fig. 4, unsigned uncoloured engraving. Drawing likely made by E. Kickius and engraving likely executed by M. van der Gucht (Sequeira *et al.*, 2010-a: 599)]. Reproduction of engraving published by Sequeira *et al.* (2010-a: 601). Text in Sloane (1696: 35; 1707: 16): "Gramen miliaceum angustifolium [...] In Insulae Maderae sepibus non procul ab urbe Funchall inveni."

Note: Sloane's illustration of this Madeiran native species was based on material collected during his visit to Madeira in 1687.

PLAGIOCHASMA RUPESTRE (G. FORST.) STEPHANI, Bull. Herb. Boissier 6: 783, 1898 ≡ *Aytonia rupestris* G. Forst, Char. Gen. Pl.: 148, 1775 (Aytoniaceae).

George Forster (unknown date, watercolour housed at the Natural History Museum, London. Uncoloured engravings are housed at the Natural History Museum, London and V. L. Komarov Botanical Institute, St. Petersburg, Russia). Text on watercolour: "297"; "Aitonia rupestris. Pl. Atlant. in Commentat. Gotting. 9. p. 73. n. 170"; "Madeira"; "I. 1."; "Ge. Forster." Reported for Madeira as Aitonia rupestris by Forster (1789: 73).



Figure 16.- Coloured engraving of the Macaronesian endemic *Phyllis nobla* L. (Rubiaceae) published by Bonelli (1780). Unknown author of drawing but engraving was likely executed by Magdalena Bouchard and likely painted by Cesare Ubertini, but see Stevenson (1961: 361) for details regarding authorship of *Hortus Romancus* illustrations. Image courtesy of Université de Liège. Réseau des Bibliothèques.

Forster & Forster (1775: [plate] 74, unsigned uncoloured engraving. It is likely that the drawing was made by George Forster). Engraving reproduced by Francisco-Ortega *et al.* (2015). Text on engraving: "*Cryptogamia Algae 74. Aytonia.*" Text in Forster & Forster (1775: [unnumbered page] plant entry 74): "*Aytonia Mascuilis Flores innati* [...] *Rupestris. I. Aytonia.*"

Note: The watercolour was made during the second voyage of Captain James Cook and was executed using material collected in Madeira in 1772. Whilst no provenance is given in the protologue and associated engraving (Forster & Forster, 1775) of *Aytonia rupestris*, Forster (1789) subsequently indicated that the species occurs in Madeira and did not report this taxon for any other locality visited during the second voyage of Captain Cook. Therefore it appears that this engraving and that of *Epibaterium pendulum* from the Cape Verdes [also published by Forster & Forster (1775)] are the earliest published Macaronesian illustrations associated with post-Linnaean plant taxonomic descriptions. This species is native to the Cape Verdes.

PLOCAMA PENDULA AITON, Hort. Kew. 1: 392, 1789 (Rubiaceae).

Plukenet (1694: TAB. CCCXI, Fig: 3, uncoloured engraving. Engraving executed by M. Vander Gucht). Text in Plukenet (1696: 303): "Polygonum Juncoide Scoparium ex Insulis Fortunatis."

Note: The species is endemic to the Canary Islands and is found in all of the islands except Lanzarote.

POLYGONUM HYDROPIPER L., Sp. Pl. 1: 361, 1753 (Polygonaceae).

Sloane [1707: Tab. 3, Fig. 1, unsigned uncoloured engraving. Drawing likely made by E. Kickius and engraving likely executed by M. van der Gucht (Sequeira *et al.*, 2010-a: 599)]. Reproduction of engraving published by Sequeira *et al.* (2010-a: 602). Text in Sloane (1696: 48; 1707: 17): "Persicaria procumbens longissima [...] Ad ripas fluminis prope urbem Funchall in Insula Madera [...]."

Note: Sloane's illustration was based on material collected during his visit to Madeira in 1687. This species is native to this island.

PTERIS INCOMPLETA CAV., Anales Ci. Nat. 4: 107, 1801 (Pteridaceae).

Sydney Parkinson & unknown artist (unknown date, watercolour housed at the Natural History Museum, London, original sketch by Parkinson, colouring made by an unknown author). Text on watercolour: "Osmunda maderiensis."; "T. 62. Madeira."
Note: The watercolour was made during the first voyage of Captain James Cook and was based on material collected in Madeira in 1768. This species is native to this island.

RANUNCULUS CORTUSIFOLIUS WILLD., Enum. Pl.: 588, 1809 (Ranunculaceae).

Baudin (1796-1798: [plate with printed number] **68**, unsigned watercolour as part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Jangoux (2009: 162). Text on watercolour: "*Ranunculus.*/."

Note: This is a Macaronesian endemic that occurs in the Azores, Canary Islands and Madeira. It is likely that the watercolour was prepared by the Spanish artist A. González dur-

ing a four month stay in Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists.

RANUNCULUS FLUITANS LAM., Fl. Franç. 3: 184, 1779.

Feuillée (1724: [plate] **12**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 169). Text on painting: "*Ranunculus aquaticus folio ro-tundo Radice capillacea*."

Note: Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724. It is likely that this is a native species in the archipelago.

ROCCELLA CF. TINCTORIA DC., Fl. Franç. ed. 3, 2: 334, 1805 (Roccellaceae).

Petiver (1709: **VII, 12**, unsigned uncoloured engraving). Reproduction of engraving published by Santos-Guerra *et al.* (2011: 1748). Text in Petiver (1699: 40; 1702: 13; 1709: 4): "*Muscus Ceranoides Palmensis comis digitatis, Orchili dictus.*"

Feuillée (1724: [plate] **16**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris) (Fig. 5). Painting reproduced by Herrera Piqué (2006-b: 205). Text on painting: "*Coralloides Saxatilis purpurascens cornua referens*."

Note: Petiver's illustration was based on material collected on the island of La Palma by James Cuninghame between December 1697 and February 1698. Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724. This is a native lichen in the Canary Islands.

RUBIA FRUTICOSA AITON, Hort. Kew. 1: 147, 1789 SSP. FRUTICOSA (Rubiaceae).

Plukenet (1694: TAB. CCCXI, Fig: 4, uncoloured engraving. Engraving executed by M. Vander Gucht). Reproduction of engraving published by Francisco-Ortega *et al.* (1994: 22). Text in Plukenet (1696: 323): "*Rubia arborescens asperior Insularum Canariensium* [...]."

Jacquin (1781-1787, unknown fascicle: 25, unsigned coloured engraving). Text in Jacquin (1781-1787: 3).

Note: This is a Macaronesian endemic occurring in the Canaries, Madeira, and the Selvagens Islands. The species has two other subspecies that are endemic to the Canary Islands, they are found in Gran Canaria, La Gomera, and Tenerife. Jacquin's illustration was based on plants grown from seeds collected by Masson (Jacquin, 1787: 71) in Tenerife in 1778. Engravings found in Jacquin's *Icones Plantarum Rariorum* were executed by J. Adams based on drawings made by J. Hofbauer, Franz Bauer, Ferdinand Bauer, and J. Scharf (Johnston, 1992: 505).

RUMEX LUNARIA L., Sp. Pl. 1: 336, 1753 = *Rumex polygamous* Cav., Icon. 1: 14, 1791 (Polygonaceae).

L'Obel (1576: **470**, unsigned uncoloured woodcut). Text in L'Obel (1576: 470-471): *"Lunaria Magorum Arabum. Ital.* Lunaria di Magi Arabi."

Bauhin *et al.* (1651: **994**, unsigned uncoloured woodcut). Text in Bauhin *et al.* (1651: 994): "*Lunaria magorum Arabum.*"

- Plukenet (1694: TAB. CCLII, Fig: 3, uncoloured engraving. Engraving executed by M. Vander Gucht). Text in Plukenet (1696: 8; 1700: 3): "Acetosa arborescens, subrotundo folio; ex Insulis Fortunatis."
- Cavanilles (1791: **Tab. 22**, uncoloured engraving. Drawing made by A. J. Cavanilles and engraving executed by M. Gamborino). Illustration reproduced by Cavanilles (1995: Tab. 22). Text in Cavanilles (1791: 14-15): "*Rumex polygamous* [...] *Habitat in Canaria Insula* [...]."

Note: This is a Canary Island endemic, distributed on all islands. Linnaeus (1753: 336) indicated that Clusius' and L'Obels woodcuts referred to this species although the descriptions provided by these authors did not refer to the Canaries. The illustration published by Bauhin *et al.* (1651) is a mirror image of the one published by L'Obel (1576). Cavanilles (1791: 14-15) reported that this species was cultivated in the Real Jardín Botánico de Madrid and we cannot rule out that his illustration depicts plants grown there.

SALVIA CANARIENSIS L., Sp. Pl. 1: 26, 1753 (Lamiaceae).

- Plukenet (1694: TAB. CCCI, Fig. 2, unsigned uncoloured engraving). Reproduction of engraving published by Francisco-Ortega *et al.* (1994: 15). Text in Plukenet (1696: 185; 1700: 103): "Horminum hastatis amplioribus foliis [...] ex Insula Gomera quae una est ex Fortunatis [...]."
- Morison (1699: **Tab. 13, Section 11**, uncoloured engraving. Engraving executed by F. H. van Hove). Text in Morison (1699: 394): "*Horminum Canariense tomento-sum hastato folio* [...]."

Note: This is a Canary Island endemic found on all islands. Plukenet's illustration was based on material from La Gomera. The third volume of Morison's *Plantarum Historiae Universalis Oxoniensis* was published by Jacob Bobart the Younger, after Morison's death (Oliver, 1913: 18). Many of Morison's illustrations were drawn and engraved by M. Burghes, F. H. Vanhove, and J. Savage (Quinby, 1958: 379). Johnston (1992: 247) also listed W. Sunman and F. Barlow as drawers and H. van Otteren, R. White, A. Blooteling, D. Loggan, W. Faithorne, R. Vaughan, and L. Burnford as engravers who contributed to Morison's work.

SCILLA HAEMORRHOIDALIS WEBB & BERTHEL., Hist. Nat. Iles Canaries Phytogr. 3: 336, 1847 (Asparagaceae).

- Baudin (1796-1798: [plate with printed number] **40**, unsigned watercolour). Painting reproduced by Herrera Piqué (2006-a: 285) and Jangoux (2009: 149). Text on painting: "*Scilla amoena.*/. Lin./."
- Ledru (1797: [plate without number] 14, unsigned watercolour). Text on painting: "Scilla amoena. Lin."

Note: The two illustrations of this Canary Island native are included in manuscripts located in the Muséum National d'Histoire Naturelle, Paris. The watercolours are very similar and it is likely that were made by the Spanish artist A. González during a four month stay in Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists.

SCROPHULARIA GLABRATA AITON, Hort. Kew. 2: 341, 1789 (Scrophulariaceae).

Jacquin (1797-b: **T. 209**, unsigned coloured engraving). Text in Jacquin (1797-b: 44). **Note:** This species is an endemic to the Canary Islands. The illustration was based on material cultivated in the Imperial Gardens of Schönbrunn, Austria. The plates of Jacquin's *Plantarum Rariorum Horti Caesarei Schoenbrunnensis* were engraved by J. Scharf and M. Sedelmayer (Stearn *et al.*, 1990: 105).

SEMELE ANDROGYNA (L.) KUNTH, Enum. Pl. 5: 277, $1850 \equiv Ruscus androgynus$ L., Sp. Pl. 2: 1041, 1753 (Asparagaceae).

Dillenius [1732: T. CCL, F. 322, unsigned uncoloured engraving. Drawing and engraving made by Dillenius (Stevenson, 1961: 375)]. Text in Dillenius (1732: 332-333): "Ruscus latifolius, e foliorum [...] Canariensis originis [...]."

Note: This is a Macaronesian endemic distributed in the Canary Islands and Madeira. The illustration depicts a plant that was cultivated in James Sherard's Garden at Eltham, England.

SENNA MULTIGLANDULOSA (JACQ.) H. S. IRWIN & BARNEBY, Mem. New York Bot. Gard. 35: 357, 1982 = Cassia multiglandulosa Jacq., Icon. Pl. Rar. 1: 8, 1781-1787 (Fabaceae).

Jacquin (1784: [plate] 72, unsigned coloured engraving).

Baudin (1796-1798: [plate with printed number] **43**, unsigned watercolour). Painting reproduced by Jangoux (2009: 152). Text on watercolour: "*Cassia tomentosa.*/. Lamark./."

Ledru (1797: [plate without number] 7, unsigned watercolour). Text on painting: "Cassia Tomentosa. Lamark."

Note: This is a cultivated species. Jacquin's engraving depicts plants grown from seeds that were collected in Tenerife by Masson (Jacquin, 1787: 42) in 1778. Engravings found in Jacquin's *Icones Plantarum Rariorum* were executed by J. Adams based on drawings made by J. Hofbauer, Franz Bauer, Ferdinand Bauer, and J. Scharf (Johnston, 1992: 505). The two illustrations that are part of manuscripts by Baudin and Ledru are housed in the Muséum National d'Histoire Naturelle, Paris. The watercolours are very similar and it is likely that were made by the Spanish artist A. González during a four month stay in Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists.

SIBTHORPIA PEREGRINA L., Sp. Pl. 2: 631, 1753 (Scrophulariaceae).

- Plukenet (1694: **TAB. CCLVII, Fig. 5**, uncoloured engraving. Engraving executed by I. Savage).
- Sydney Parkinson (1768, watercolour housed at the Natural History Museum, London). Text on watercolour: "Meadia repens"; "Sydney Parkinson pinxt 1768"; "T. 36 Madeira." Coloured engraving of watercolour executed by Gerald Sibelius and published by Banks et al. (1985: 398). Watercolour reproduced by Edwards (1983: 54). Curtis (1794-a: N.º 218, coloured engraving. Engraving executed by F. Sansom). Text

in Curtis (1794-a: **218**): "Disandra Prostata. Trailing Disandra."

Note: This is a Madeiran endemic. Pakinson's watercolour was painted during the first voyage of Captain James Cook and was based on material collected in Madeira in 1768. Curtis's illustration was made from garden plants cultivated in Britain. Curtis (1794-a: 218) in-

dicated that the species was introduced into Britain in 1771. Most of the plates of *Curtis's Botanical Magazine* published during the 18th century were drawn by S. Edwards and engraved by F. Sansom (Blunt, 1951: 186).

SIDA ACUTA BURM. F., Fl. Indica: 147, 1768 = *Sida carpinifolia* L. f., Suppl. Pl.: 307, 1782 (Malvaceae).

Jacquin (1783: [plate] **135**, unsigned coloured engraving). Basionym and species description in Jacquin (1781-1787: 14): "*Sida carpinifolia*."

Cavanilles (1788: Tab. CXXXIV, Fig. 1, uncoloured engraving. Drawing made by A. J. Cavanilles and engraving executed by F. N. Sellier). Text in Cavanilles (1788: 274-275): "Sida carpinifolia [...] Habitat in Madera [...]."

Note: Jacquin's engraving was based on plants collected at the Convento de São Francisco in Madeira by Masson (Jacquin 1787: 38) between 1776 and 1779. Engravings found in Jacquin's *Icones Plantarum Rariorum* were executed by J. Adams based on drawings made by J. Hofbauer, Franz Bauer, Ferdinand Bauer, and J. Scharf (Johnston, 1992: 505). Cavanilles (1788: 264-265) reported this species for the Royal Gardens of Paris (= "*R. H. P*"); and we cannot rule out that his illustration depicts plants grown there. This species is introduced in Madeira.

SIDA RHOMBIFOLIA L., Sp. Pl. 2: 684, 1753.

George Forster (unknown date, watercolour housed at the Natural History Museum, London. Uncoloured engraving housed at the V. L. Komarov Botanical Institute, St. Petersburg, Russia). Text on watercolour: "193"; "[Illeg.] 76"; "Sida salicifolia."; "rhombifolia?. Pl. Atlant. in Commentat. Gotting. 9. p. 62. n. 105"; "St. Jago"; "I. 16."; "Ge. Forster." Reported for Santiago Island (Cape Verde Islands) as Sida rhombifolia? by Forster (1789: 76).

Note: This watercolour was made during the second voyage of Captain James Cook and was based on material collected in Santiago in the Cape Verdes in 1772. It is likely a native species in the archipelago.

SIDERITIS CANARIENSIS L., Sp. Pl. 2: 574, 1753 (Lamiaceae).

- Plukenet (1694: TAB. CCCXXII, Fig: 4, uncoloured engraving. Engraving executed by M. Vander Gucht). Text in Plukenet (1696: 356): "Stachys amplissimis Verbasci foliis [...] ex Insula Canarina [...]."
- Jan Moninckx (unknown date between 1686 and 1700: Moninckx Atlas, vol. 4: [plate without number] 50, watercolour housed at the Bibliotheek van de Universiteit van Amsterdam). Text on watercolour: "Jajannis Moninckx. F." Text in the Moninckx Atlas: "Stachys Canariensis frutescens [...]."
- Commelin (1701: **Fig. 99**, unsigned uncoloured engraving). Text in Commelin (1701: 197): "*Stachys canariensis, frutescens* [...]."
- Jacquin (1776: **Tab. 30**, unsigned coloured engraving). Text in Jacquin (1776: 18-19): *"Tabula trigesima. Sideritis canariensis* [...]."

Note: This is a Canary Island endemic found in El Hierro, La Palma, and Tenerife. The painting from the *Moninckx Atlas* was used to execute Commelin's engraving and both are based

on material cultivated in the Botanic Garden of Amsterdam. Jacquin's (1776) illustration was based on plants cultivated in the University of Vienna Botanic Garden (= *Hortus Botanicus Vindobonensis*) and was engraved by Jacquin and F. Scheidl (Johnston, 1992: 463).

SILENE VULGARIS (MOENCH) GARCKE, Fl. N. Mitt.-Deutschland, ed. 9: 64, $1869 \equiv Behen vulgaris$ Moench, Methodus: 709, 1794 (Caryophyllaceae).

Feuillée (1724: [plate] **22**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 230). Text on painting: "*Lichnis Silvestris alboflore; Laciniato, multiflora*."

Note: Feuillée's painting was made in El Hierro during his voyage to the Canary Islands in 1724. This is a native species in the Canary Islands.

SMILAX PENDULINA LOWE, Trans. Cambridge Philos. Soc. 4(1): 12, 1833 (Smilacaceae).

Sydney Parkinson & unknown artist (unknown date, watercolour housed at the Natural History Museum, London, original sketch made by Parkinson, colouring executed by an unknown author). Text on watercolour: "*Smilax latifolia*." Watercolour reproduced by Adams (1986: 20).

Note: This is a Madeiran endemic. The watercolour was made during the first voyage of Captain James Cook and was based on material collected in Madeira in 1768.

SOLANUM TUBEROSUM L., Sp. Pl. 1: 185, 1753 (Solanaceae).

Feuillée (1724: [plate] **8**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 127). Text on painting: "*Solanum Tuberosum oculentum radice pomifera*."

Note: This species is cultivated in the Canary Islands. Feuillée's painting was probably made in Tenerife during his voyage to the Canary Islands in 1724.

SOLANUM VESPERTILIO AITON, Hort. Kew. 1: 252, 1789.

Plukenet (1694: **TAB. CCCXVI, Fig. 3**, uncoloured engraving. Engraving executed by G. V. Caseel). Reproduction of engraving published by Francisco-Ortega *et al.* (1994: 24). Text in Plukenet (1696: 351): *"Solanum tomentosum Canariense* [...]."

Note: The species is endemic to the Canary Islands and it is found in Gran Canaria and Tenerife.

SONCHUS ACAULIS DUM. COURS., Bot. Cult., ed. 2. 4: 12, 1811 (Asteraceae).

Baudin (1796-1798: [plate with printed number] **55**, unsigned watercolour as part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-a: 286) and Jangoux (2009: 156). Text on watercolour: "*Sonchus fruticosus.*/."

Note: This is a Canary Island endemic found in Gran Canaria and Tenerife. It is likely that this watercolour was made by the Spanish artist A. González during the four month expedition to Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists.

Sonchus congestus Willd., Ges. Naturf. Freunde Berlin Mag. Neuesten Entdeck. Gesammten Naturk. 1: 136, 1807.

Jacquin (1781-1787, unknown fascicle: [plate] **161**, unsigned coloured engraving). Text in Jacquin (1781-1787: 16): "*Sonchus fruticosus*."

Note: This is a Canary Island endemic distributed on Gran Canaria and Tenerife. Jacquin (1787: 83) reported that plants grown from seed collected by Masson and sent to him were the source for his illustrations. He also reported the Spanish common name "Lechuga de pastor" for this species. However, he mistakenly assigned this species to the Madeiran endemic *S. fruticosus*. Masson visited the Canary Islands in 1779. Engravings found in Jacquin's *Icones Plantarum Rariorum* were executed by J. Adams based on drawings made by J. Hofbauer, Franz Bauer, Ferdinand Bauer, and J. Scharf (Johnston, 1992: 505).

SONCHUS FRUTICOSUS L. F., Suppl. Pl.: 346, 1782.

L'Héritier (1791-a: LXXXI, uncoloured engraving. Drawing made by P. J. Redouté and engraving executed by P. Maleuvre). Text in L'Héritier (1791-a: 171-172).

Note: This is a Madeiran endemic. L'Héritier's engraving was based on material collected in this island by Masson (L'Héritier, 1791-a: 171-172) between 1776 and 1779.

SONCHUS RADICATUS AITON, Hort. Kew. 3: 116, 1789.

Feuillée (1724: [plate] **39**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 311). Text on painting: "*hieracium dentis Leonis folio, radice crassisima flore magno.*"

Note: This is a Tenerife endemic. Feuillée's painting was made in 1724.

SPARTOCYTISUS SUPRANUBIUS (L. F.) G. KUNKEL, Cuad. Bot. Canaria 26: 80, 1976 = *Spartium supranubium* L. f., Suppl. Pl.: 319, 1782 [as "*supranulium*"] (Fabaceae).

L'Héritier (1805: **LXXXV**, engraving. Drawing made by P. J. Redouté and engraving executed by C. Milsan). There are coloured and uncoloured versions of this illustration (Buchheim 1965: 44). Text in L'Héritier (1791-b: 183): "*Spartium nubigena*"

Note: This is a Canary Island endemic distributed on La Palma and Tenerife. The engraving was based on material collected in Tenerife by Joseph H. Boissieu La Martinière during the La Pérouse expedition in 1785 (L'Héritier, 1791-b: 183).

SPREKELIA FORMOSISSIMA (L.) HERB., App. Bot. Reg.: 35, 1821 ≡ *Amaryllis formosissima* L., Sp. Pl. 1: 293, 1753 (Amaryllidaceae).

- Baudin (1796-1798: [plate with printed number] **60**, unsigned watercolour). Painting reproduced by Herrera Piqué (2006-a: 286) and Jangoux (2009: 158). Text on watercolour: "*Amarillis formosissima.*/. Lin./."
- Ledru (1797: [plate without number] **1**, unsigned watercolour). Text on painting: "*Amarillis formosissima*. Lin."

Note: This is a cultivated species. Both illustrations are included in manuscripts located in the Muséum National d'Histoire Naturelle, Paris. The watercolours are very similar and it

is likely that were made by the Spanish artist A. González during a four month stay in Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists.

STACHYS CF. *OCYMASTRUM* (L.) BRIQ., Nat. Pflanzenfam. Nachtr. 1: 291, $1897 \equiv Sideritis$ *ocymastrum* L., Syst. Nat., ed. 10, 2: 1098, 1759 = Stachys canariensis Jacq., Icon. Pl. Rar. 1: 11, 1781-1787 (Lamiaceae).

Jacquin (1782: [plate] 108, unsigned coloured engraving).

Note: It appears that the illustration was based on plants grown from seeds cultivated at the Botanic Garden of Vienna. The material was originally collected in the Canaries by Masson (Jacquin, 1787: 37) in 1778. Engravings found in Jacquin's *Icones Plantarum Rariorum* were executed by J. Adams based on drawings made by J. Hofbauer, Franz Bauer, Ferdinand Bauer, and J. Scharf (Johnston, 1992: 505). This species is native in the Canary Islands.

STYPOCAULON SCOPARIUM (L.) KÜTZING, Phycol. Gen.: 293, 1843 ≡ *Conferva scoparia* L., Sp. Pl. 2: 1165, 1743 (Stypocaulaceae).

Sloane [1707: Tab. 2, Fig. 1, unsigned uncoloured engraving. Drawing likely made by E. Kickius and engraving likely executed by M. van der Gucht (Sequeira *et al.*, 2010-a: 599)]. Reproduction of engraving published by Sequeira *et al.* (2010-a: 601). Text in Sloane (1696: 6; 1791: 15): "Muscus marinus plumiformis [...] In Insulae Maderae littus, ejectam hanc plantam prope locum Funchall dictum inveni."

Note: Sloane's illustration was based on material collected during his visit to Madeira in 1687. This is a brown alga species that is native in the coasts of this island.

SYZYGIUM JAMBOS (L.) ALSTON, Handb. Fl. Ceylon 6 (Suppl.): 115, $1931 \equiv Eugenia jambos$ L., Sp. Pl. 1: 470, 1753 (Myrtaceae).

Sydney Parkinson (1768, watercolour housed at the Natural History Museum, London).
Text on watercolour: "*Eugenia jambos*. Linn."; "Sydney Parkinson pinxt 1768.";
"T. 34. Madeira." Watercolour reproduced by Edwards (1983: 50).

Note: The watercolour was made during the first voyage of Captain James Cook. It was based on material of this cultivated species collected in Madeira in 1768.

TANACETUM PARTHENIUM (L.) SCH. BIP., Tanaceteen: 55, $1844 \equiv Matricaria parthenium$ L., Sp. Pl. 2: 890, 1753 (Asteraceae).

Feuillée (1724: [plate] **29**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 264). Text on painting: "*Bidens Radice humifusa, Artemisae folio, flore albo radiato, caule quadrato.*"

Note: Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724. This species is introduced in the Canary Islands.

TELINE CANARIENSIS (L.) WEBB & BERTHEL., Hist. Nat. Iles Canaries Phytogr. 2: 37, $1842 \equiv$ *Genista canariensis* L., Sp. Pl. 2: 709, 1753 (Fabaceae).

- Clusius (1601: **94**, unsigned uncoloured woodcut). Text in Clusius (1601: 93-94): *"Cytisus I*[...]."
- Plukenet (1694: TAB. CCLXXVII, Fig. 5, unsigned uncoloured engraving). Text in Plukenet (1696: 128): "Cytisus Canariensis, microphyllos, angustifolius, prorsus incanis [...]."
- Maria Moninckx (unknown date between 1686 and 1699: *Moninckx Atlas*, vol. 3: [plate without number] 50, watercolour housed at the Bibliotheek van de Universiteit van Amsterdam). Watercolour reproduced by Francisco-Ortega *et al.* (2012: 125). Text on watercolour: "Maria Moninckx. F." Text in the *Moninckx Atlas*: "*Cytisus Canariensis sempervirens* [...]."
- Commelin (1701: **Fig. 52**, unsigned uncoloured engraving). Text in Commelin (1701: 103-104): "*Cytisus canariensis semper virens* [...]."
- Seba (1735: **Tab. 4, Nº. 6**, unsigned coloured engraving). Text in Seba (1735: 6): *"Cytisus Canariensis flore candido & citrino."*
- Wendland (1789: [plate] 91, watercolour painted by Wendland and included in a manuscript housed at the Gottfried Wilhelm Leibniz Bibliothek - Niedersächsische Landesbibliothek, Germany). Text on watercolour: "91"; "Genista canariensis L."

Note: This is a Canary Island endemic distributed in Gran Canaria and Tenerife. The painting from the *Moninckx Atlas* was used to execute Commelin's engraving and both are therefore based on material cultivated in the Botanic Garden of Amsterdam. Wendland's watercolour was based on material cultivated in the Herrenhausen Gardens, Hanover, Germany. Clusius' illustration and descriptions do not explicitly refer to the Canary Islands but Linnaeus (1753: 709) assigned Clusius' account to *Genista canariensis*.

TEUCRIUM ABUTILOIDES L'HÉR., Stirp. Nov.: 84, 1788 (Lamiaceae).

Jacquin (1798: **T. 358**, unsigned coloured engraving). Text in Jacquin (1798: 58). **Note:** This is a Madeiran endemic. However, Jacquin (1787: 44) mistakenly indicated that this species was found in Tenerife. The illustration was based on material grown in the imperial Gardens of Schönbrunn, Austria. The plates of Jacquin's *Plantarum Rariorum Horti Caesarei Schoenbrunnensis* were engraved by J. Scharf and M. Sedelmayer (Stearn *et al.*, 1990: 105).

TEUCRIUM BETONICUM L'HÉR., Stirp. Nov.: 83, 1788 = *Teucrium betonicifolium* Jacq., Collectanea 1: 145, 1787.

- Sloane [1707: Tab. 3, Fig. 3, unsigned uncoloured engraving. Drawing likely made by E. Kickius and engraving likely executed by M. van der Gucht (Sequeira *et al.*, 2010-a: 599)]. Reproduction of engraving published by Sequeira *et al.* (2010-a: 602). Text in Sloane (1696: 64; 1707: 17): "Salvia major folio glauco serrato. In Insula Madera prope urbem Funchall college."
- George Forster (1772-1773, watercolour housed at the Natural History Museum, London) (Fig. 17). Text on watercolour: "172"; "*Teucrium incanum*"; "*canescens* Pl. Atlant. in Commentat. Gotting. 9. p. 58. n. 88"; "*betonicum* L'Herit. Stirp. Nov. 1.



Figure 17.- Watercolour of the Madeiran endemic *Teucrium betonicum* L'Hér. (Lamiaceae) made by George Forster (sketched on August, 1772, painted on February 28, 1773), based on material found in Madeira during the second voyage of Captain Cook. Image copyright of the Natural Museum of London.

p. 83. +. 40. Hort. Kew. 2. p. 279"; "GF sketched Aug 1772. painted Feb. 28th. 1773"; Ge. Forster." Black and white version reproduced by Hoare (1982: Fig. 6, opp. p. 149). Reported for Madeira as *T. canescens* by Forster (1789: 58).

L'Héritier (1788-b: **XL**, engraving. Drawing made by P. J. Redouté and engraved by J. B. Guyard). There are coloured and uncoloured versions of this engraving.

Jacquin (1787: T. 17, Fig. 2, unsigned coloured engraving).

Note: This is a Madeiran endemic species. Sloane's illustration was based on material collected during his visit to the island in 1687. Foster's watercolour was made during the second voyage of Captain James Cook and was based on material collected in Madeira in 1772. L'Héritier's engraving depicts plants collected by Banks and Solander in 1768 during Cook's first voyage and by Masson between 1776 and 1779 (L'Héritier, 1788-b: 83-84).

TEUCRIUM HETEROPHYLLUM L'HÉR., Stirp. Nov.: 84, 1788.

- Plukenet (1694: CCCXIII, Fig. 2, unsigned uncoloured engraving). Text in Plukenet (1696: 326; 1700: 164): "Saamounae Brasiliensium floribus [...] ex Insulis Fortunatis."
- Baudin (1796-1798: [plate with printed number] **72**, unsigned watercolour). Painting reproduced by Jangoux (2009: 164). Text on watercolour: "*Teucrium Canariense.*/. Lin./."
- Ledru (1797: [plate without number] **16**, unsigned watercolour). Text on painting: *"Teucrium Canariense*. Lin."

Note: This is a Macaronesian endemic with subspecies distributed in Canary Islands (subspecies *heterophyllum*, *brevipilosum*, and *hierrense*) and Madeira (subspecies *heterophyllum*); however, all three illustrations were based on material from the Canary Islands. The watercolours found in Baudin's and Ledru's works are part of manuscripts located in the Muséum National d'Histoire Naturelle, Paris. The watercolours are very similar and it is likely that were made by the Spanish artist A. González during a four month stay in Tenerife (November 1796 - March 1797), en route to the Antilles, led by Captain Nicolas Baudin on which André-Pierre Ledru was one of the botanists.

TOLPIS SUCCULENTA LOWE, Man. Fl. Madeira 1: 525, 1868 (Asteraceae).

Sloane [1707: Tab. 5, Fig. 1 & 2, Fig. 2, unsigned uncoloured engraving. Drawing likely made by E. Kickius and engraving likely executed by M. van der Gucht (Sequeira *et al.*, 2010-a: 599)]. Reproduction of engraving published by Sequeira *et al.* (2010-a: 605). Text in Sloane (1696: 123; 1707: 19): "*Hieracium fruticosum foliis* [...] prope urbem Funchall in Insula Madera collegi."

Note: This is a Macaronesian endemic distributed in the Azores and Madeira. Sloane's illustration was based on material collected during his visit to Madeira in 1687.

TORILIS CF. *NODOSA* (L.) GAERTN., Fruct. Sem. Pl. 1: 82, $1788 \equiv Tordylium nodosum$ L., Sp. Pl. 1: 240, 1753 (Apiaceae).

Feuillée (1724: [plate] **36**, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 298). Text on painting: "*Daucus humifusus, tenuifolia*."

Note: Feuillée's painting was made in Tenerife during his voyage to the Canary Islands in 1724. It is likely that this is a non-native species in the Canary Islands.

TRIBULUS CISTOIDES L., Sp. Pl. 1: 387, 1753 (Zygophyllaceae).

George Forster (unknown date, watercolour housed at the Natural History Museum, London). Text on watercolour: "134"; "*Tribulus terrestris*. Pl. Atlant. in Commentat. Gotting. 9. p. 55. n. 67"; "*ZYGOPHYLLUM tomentosum*"; "St. Jago"; "I. 15"; "Ge. Forster." Reported for Santiago Island (Cape Verde Islands) as *T. terrestris* by Forster (1789: 55).

Note: The watercolour was made during the second voyage of Captain James Cook and it was based on material collected in the Cape Verdes in 1772. This is a non-native species in this archipelago.

TRICHODESMA AFRICANUM (L.) SM., Cycl. 36: 2, $1817 \equiv Borago \ africana \ L., Sp. Pl. 1: 138, 1753 (Boraginaceae).$

George Forster (unknown date, watercolour housed at the Gotha Library, University of Erfurt, Turingia, Germany). Text on watercolour: "*Borago tristis*. F."; "G. Forster, del."; "75." Reported for the Cape Verde Islands as *Borago tristis* by Forster (1789: 51).

Note: The watercolour was made during the second voyage of Captain James Cook. It was painted based on material collected in the Cape Verdes in 1772. This is a native species in this archipelago.

VIOLA CHEIRANTHIFOLIA HUMB. & BONPL., Pl. Aequinoct. 1: 111, 1807 (Violaceae).

Feuillée (1724: [plate] 15, unsigned achromatic watercolour, part of a manuscript housed at the Muséum National d'Histoire Naturelle, Paris). Painting reproduced by Herrera Piqué (2006-b: 203). Text on painting: "*Viola Tenerifera Radice fibrosa*."
Note: The species is endemic to Tenerife. Feuillée's painting was made in 1724.

RELEVANT ARTISTS AND CONCLUDING REMARKS

The selection of Macaronesian illustrations presented in this paper demonstrates that the natural history of these islands was relatively well-known among pre-19th century herbalists, naturalists and horticulturists from Europe. A total of 296 scientific illustrations of Macaronesian plants were produced during this period. This total excludes copies or mirror images of the original artworks for *Dracaena draco* and *Rumex lunaria* found in the works of Clusius (1601), Bauhin *et al.* (1651), and Römer (1796), and multiple sets of original watercolours made by G. Forster, A. González, and F. Masson.

These images were part of the works of influential early botanists (see above) and were made by some of the most relevant masters of botanical illustration. For instance, the Canarian endemic *Canarina canariensis* was depicted in one of the 36 engravings found in the seminal work *Hortus Cliffortianus* by Linnaeus (1738). The plates of this book are considered as the first ones to clearly show detailed flower parts and plant growth habits (Keeler,

2009: 14). The illustration of *C. canariensis* was drawn by the famous plant artist Georg Dionysius Ehret, and was engraved by Jan Wandelaar. As stated by Blunt (1951: 143), "The genius of Georg Dionysius Ehret (1708-70) was the dominant influence in botanical art during the middle years of the eighteenth century."

Pierre-Joseph Redouté is another well-known painter who illustrated Macaronesian plants. He is regarded as one of the best botanical artists of all times (Stearn, 1990: 24-25) and the "most popular, indeed, in the whole history of botanical art" (Blunt, 1951: 173). Redouté started his career under the patronage of L'Héritier (Blunt, 1951: 174; Stearn, 1990: 24), and his first illustrations were published in L'Héritier's *Sertum Anglicum*. This work included eleven plates for Macaronesian plants, and ten of them were drawn by Redouté. Subsequently he drew additional illustrations for engravings of Macaronesian plants published by L'Héritier (1786, 1787-1788, 1788-b, 1791-a, 1805) and De Candolle (1799-a, 1799-b).

Other artists who have a relevant place in the history of botanical illustrations also produced artworks for Macaronesian plants. Among them it is worth mentioning Johan and Maria Moninckx from the Netherlands who painted 13 of the watercolours found in one of the gems of botanical art from the late 17th and early 18th century: the *Moninckx Atlas* (Wijnands, 1983). Macaronesian paintings found in this collection include two additional watercolours whose authors are unknown.

Although none of the engravings for Macaronesian plants published by Jacquin was signed, the work of this prolific botanist had some of the best illustrations ever produced. Important masters of the botanical art worked for him; thus, engravings found in Jacquin's publications have a relevant place in the history of botany (Blunt, 1990: 36; Sherwood, 2005: 108). Among illustrators contributing to Jacquin's works there were the brothers Ferdinand and Franz Bauer, who are considered two of the greatest botanical artists of all time (Stearn, 1990: 21). Additional distinguished botanical artists who made illustration for plants from these archipelagos included James Sowerby [see Blunt (1951: 191-192)], who contributed to L'Héritier's *Sertum Anglicum (Bystropogon plumosus)* and Smith's *Icones Pictae Plantarum Rariorum* (engraving of *Ixanthus viscosus* was likely executed by Sowerby)], and Henricus Schwegman [see Stearn, (1940)], who likely drew and engraved the illustration of *Clethra arborea* published by Schneevoogt (1793).

Among those who illustrated plants from Macaronesia, Antonio José Cavanilles is historically relevant. He was the earliest botanist from Spain to describe new plant species endemic to the islands. During the 18th century he published engravings for four Macaronesian species (*Geranium palmatum* and *Sida acuta* from Madeira and *Periploca laevigata* and *Rumex lunaria* from the Canaries). The four drawings made by Cavanilles were engraved by Tomás López Enguídanos, M. Gamborino, and François Noël Sellier (Cavanilles, 1787, 1788, 1791, 1795). Cavanilles was the director of the Real Jardín Botánico de Madrid between 1801 and 1804 and a good friend of José Viera y Clavijo from Tenerife (Portoles i Sanz, 2004: 318, 323, 325). The latter was the most important intellectual from the Canary Islands during the 18th century (Morales Lezcano, 1965: 19).

The Age of Enlightenment ranged approximately between the second half of the 17th century until the end of the 18th century, and it was a pivotal period for Western Civilization. The intellectual developments that unfolded during this time were among the most

important ones in the history of science; they resulted in a philosophical movement that proposed critical examinations of religious perspectives to explain nature. Furthermore this school of thought placed the power of reason as central in virtually all aspects of human society (Zakai, 2006: 80). The Enlightenment was a golden period for geographical and natural history exploration. Scientific plant illustrations achieved great relevance as they helped to communicate botanical knowledge particularly in the emerging field of taxonomy (Nickelsen, 2006: 1-2). During this time the publication of florilegia and herbals reached an extraordinary splendor, and these works relied extensively on paintings and drawings to explain the natural world (Smith, 2006: 85). These illustrations highlighted the relevance of botanical studies in a world in which scientific reasoning through empirically oriented approaches started to influence not only science, but also ethics, politics, and the broad sociological setting of Europe (Bender, 1998: 13).

ACKNOWLEDGEMENTS

We dedicate this study to our colleague Charles Jarvis in recognition for his contributions pertinent to pre-Linnaean botanical history and his research on Linnaeus's life and achievements. This study was supported by Fairchild Tropical Botanic Garden. Our gratitude to Missouri Botanical Garden; Linnean Society of London; Real Jardín Botánico de Madrid; Natural History Museum of London; Hunt Institute for Botanical Documentation; New York Botanical Garden; Gotha Library, Thuringia, Germany; University of Coimbra Library; University of Amsterdam Library; University of Liege; and Teylers Museum for providing us access to high resolution electronic copies of the illustrations included in this study. We are particularly grateful to Pascale Heurtel, Alice Lemaire, and Véronique Roy (Museum of Natural History of Paris), Antonio Concepción (Asociación de Amigos del Museo de la Naturaleza y el Hombre, Tenerife), Nancy Korber (Fairchild Tropical Botanic Garden), Elaine Charwat (Linnean Society of London), Larissa Glasser, Lisa DeCesare, and Jacqueline Ford (Harvard University), Randy Smith (Missouri Botanical Library), Dustin Williams and Charlotte Tancin (Hunt Institute for Botanical Documentation), Stéphanie Simon (University of Liege), Maia do Amaral (University of Coimbra Library), and Esther García Guillén (Real Jardín Botánico de Madrid) for their help to locate relevant bibliography and illustrations. This is contribution 311 from the Tropical Biology Program of Florida International University. This paper was based on a public lecture delivered at The Kampong Gardens (National Tropical Botanic Garden at Miami) by JF-O on October 15, 2014. Maria M. Romeiras was supported by the Portuguese Foundation for Science and project: PTDC/BIA-BIC/4113/2012 Technology (FCT) through and grant: SFRH/BGCT/113708/2015. Our gratitude extends to Scott Zona who critically read an early draft of the manuscript and to Alejandro de Vera who helped with the electronic processing and final layout of the images shown in this study.

REFERENCES

- ACEBES GINOVÉS, J. R., M. C. LEÓN ARENCIBIA, M. L. RODRÍGUEZ NAVARRO, M. DEL ARCO AGUILAR, A. GARCÍA GALLO, P. L. PÉREZ DE PAZ, O. RODRÍGUEZ DELGADO, V. E. MARTÍN OSORIO & W. WILDPRET DE LA TORRE (2010). Pteridophyta, Spermatophyta. Pp. 218-220. In: M. Arechavaleta, S. Rodríguez, N. Zurita & A. García (eds.). *Lista de especies silvestres de Canarias: Hongos, plantas y animales terrestres 2009*. Santa Cruz de Tenerife: Gobierno de Canarias.
- ADAMS, B. (1986). The flowering of the Pacific. Collins-British Museum (Natural History).
- ALDINI, T. (1625). *Exactissima descriptio rariorum quarundam plantarum, que continentur Rome in Horto Farnesiano*. Rome: Iacobi Mascardi.
- ANONYMOUS (1779). *Plantarum indigenarum et exoticarum icones ad vivum coloratae. Vol.* 2. Wien & Leipzig.
- ANONYMOUS (1792). *Plantarum indigenarum et exoticarum icones ad vivum coloratae. Vol.* 5. Wien & Leipzig.
- ANONYMOUS (1964). Announcement: "Bibliographia Huntiana." Huntia 1: 17-24.
- ANONYMOUS (2002). *Láminas de flora canaria del* Curtis's Botanical Magazine. Las Palmas de Gran Canaria: Cabildo de Gran Canaria.
- ANONYMOUS (2015). International Crassulaceae Network. Available in: http://www.crassulaceae.ch/de/home.
- ARECHAVALETA, M., N. ZURITA, M. C. MARRERO & J. L. MARTÍN, EDS. (2005). Lista preliminar de especies silvestres de Cabo Verde (hongos, plantas, y animales terrestres). Consejería de Medio Ambiente y Ordenación Territorial, Gobierno de Canarias.
- BANKS, J., D. C. SOLANDER & J. COOK (1985). Banks' Florilegium. A Publication in thirtyfour parts of seven hundred and thirty-eight copperplate engravings of plants collected on Captain James Cook's first voyage round the world in H.M.S. Endeavour 1768-1771. Part XIX Madeira plates 391-401. London: Alecto Historical Editions.
- BAÑARES BAUDET, Á. (2015). Las plantas suculentas (Crassulaceae) endémicas de las Islas Canarias. Santa Cruz de Tenerife: Turquesa.
- BARRELIER, J. (1714). *Plantae per Galliam, Hispaniam et Italiam observatae*. Paris: Stephanum Ganeau.
- BARRIOS GARCÍA, J. (2010). La imagen del Garoé en la literatura y la cartografía. Apuntes para un catálogo cronológico (1572-1924). Pp. 1690-1698. In: F. Morales Padrón (ed.). XVIII Coloquio de historia canario-americana (2008). Las Palmas de Gran Canaria: Cabildo de Gran Canaria & Casa de Colón.
- BARRIOS GARCÍA, J. (2012-a). La imagen del drago de La Orotava (Tenerife) en la literatura y el arte. Apuntes para un catálogo cronológico (1770-1878). Pp. 748-757. In: F. Morales Padrón (ed.). XIX coloquio de historia canario-americana (2010). Las Palmas de Gran Canaria: Cabildo de Gran Canaria & Casa de Colón.
- BARRIOS GARCÍA, J. (2012-b). Corrigenda. Pp. 757-758. In: F. Morales Padrón (ed.). XIX coloquio de historia canario-americana (2010). Las Palmas de Gran Canaria: Cabildo de Gran Canaria & Casa de Colón.
- BAUDIN, N. (1796-1798). *Journal de la* Belle Angélique. Two original manuscripts found in the Natural History Museum, Paris [Mss. 49 & 50. Transcription of the two manuscripts was published by Jangoux (2009)].

- BAUHIN, J., J. H. CHERLER & D. CHABREY (1651). *Historia plantarum universalis. Vol. 2*. Yverdon.
- BENDER, J. (1998). Enlightenment fiction and the scientific hypothesis. *Representations* 61: 6-28 [special journal issue: *Practices of Enlightenment*].
- BESLER, B. (1613a). Hortus Eystettensis. Vol. 2. Nuremberg.

http://teylers.adlibhosting.com/internetserver/Details/bibliotheek/2387.

- BESLER, B. (1613b). Hortus Eystettensis. Vol. 3. Nuremberg.
- BESLER, B. (2007). *Besler's book of flowers and plants: 73 full-color plates from* Hortus Eystettensis. Minesola, New York: Dover Publications.
- BLACKWELL, E. (1737-1739). A curious herbal. Vol. 2. London: John Nourse.
- BLACKWELL, E. (1754-1757). Herbarium blackwellianum. Vol. 4. [Plates 300-450]. Nuremberg: Christiani de Lavnoy.
- BLACKWELL, E. (1758-1759). *Herbarium blackwellianum. Vol. 4*. [Text for Plates 301-400]. Nuremberg: Christiani de Lavnoy.
- BLUNT, W. (1951). *The art of botanical illustration*. New York: Charles Scribner's Son [work prepared with the assistance of W. T. Stearn].
- BLUNT, W. (1983). The voyage of the *Endeavour*. Pp. 1-13. In: D. J. Carr (ed.). Sydney Parkinson. Artist of Cook's Endeavour voyage. London & Canberra: British Museum (Natural History) & Croom Helm Limited.
- BLUNT, W. (1990). The illustrators of the great flower books. Pp. 27-49. In: S. Sacheverell & W. Blunt (eds.). *Great flower books, 1700-1900: A bibliographic record of two centuries of finely-illustrated flower book* [new revised edition, bibliography edited by P. M. Synge]. New York: The Atlantic Monthly Press.
- BOERHAAVE, H. (1720). Index alter plantarum quae in Horto Academico Lugduno-Batavo. Pars Secunda. Leiden: Petrus Vander Aa.
- BONELLI, G. (1775). *Hortus romanus juxta systema tournefortianum. Vol. 3.* Rome: Bouchard & Gravier.
- BONELLI, G. (1778). *Hortus romanus juxta systema tournefortianum. Vol. 5.* Rome: Bouchard & Gravier.
- BONELLI, G. (1780). *Hortus romanus juxta systema tournefortianum. Vol. 6.* Rome: Bouchard & Gravier.
- BOURGEOIS, C. (1967). Le Père Louis Feuillée, astronome et botaniste du roi (1660-1732). *Revue d'Histoire de la Pharmacie* 192: 333-357.
- BRADLOW, F. R. (1994). Francis Masson's accounts of three journeys at the Cape of Good Hope 1772-1775. Cape Town: Tablecloth Press.
- BUCHHEIM, G. (1965). A bibliographical account of L'Héritier's "Stirpes novae." *Huntia* 2: 29-58.
- BURMAN, J. (1736). *Thesaurus zeylanicus*. Amsterdam: Janssonius-Waesberg & Salomon Schouten.
- CAVANILLES, A. J. (1787). Quarta dissertatio botanica. Paris: Franciscum Amb. Didot.
- CAVANILLES, A. J. (1788). Quinta dissertatio botanica. Paris: Franciscum Amb. Didot.
- CAVANILLES, A. J. (1791). *Icones et descriptiones plantarum. Vol. 1*. Madrid: Regia Typographia.
- CAVANILLES, A. J. (1795). *Icones et descriptiones plantarum. Vol. 3. Part 1*. Madrid: Regia Typographia.

- CAVANILLES, A. J. (1995). *Icones et descriptiones plantarum*. Valencia: Conselleria de Cultura, Generalitat Valenciana [Facsimile with introduction by M. Costa. Colección Pérez Bayer].
- CHRISTENHUSZ, M. J. M., X.-C. ZHANG & H. SCHNEIDERA (2011). A linear sequence of extant families and genera of lycophytes and ferns. *Phytotaxa* 19: 7-54.
- CIORANESCU, A. (1999). Descripción e historia del Reino de las Islas Canarias antes Afortunadas, con el parecer de sus fortificaciones. Ed. 2. Santa Cruz de Tenerife: Cabildo de Tenerife [Spanish translation of Torriani's (1592) manuscript].
- CLUSIUS, C. (1576). *Rariorum aliquot stirpium per Hispanias observatarum historia*. Antwerp: Christophori Plantini.
- CLUSIUS, C. (1601). *Rariorum plantarum historia*. Antwerp: Officina Plantiniana Apud Joannem Moretum.
- CLUSIUS, C. (1605). Exoticarum libri decem. Leiden: Officina Plantiniana Raphelengii.
- COMMELIN, C. (1706). Horti medici Amstelaedamensis plantae rariores et exoticae ad vivum aeri incisae. Leiden: Fredericus Haringh.
- COMMELIN, J. (1697). *Horti medici Amstelodamensis rariorum. Pars prima*. Amsterdam: P. & J. Blaeu.
- COMMELIN, J. (1701). *Horti medici Amstelodamensis rariorum. Pars altera*. Amsterdam: P. & J. Blaeu.
- CURTIS, W. (1790-a). Cineraria Lanata. Woolly Cineraria. The Botanical Magazine 2: 53.
- CURTIS, W. (1790-b). *Lotus Jacobaeus*. Black-flower'd Lotus. *The Botanical Magazine* 3: 79.
- CURTIS, W. (1790-c). Sempervivum Monanthes. Dwarf Houseleek. The Botanical Magazine 3: 93.
- CURTIS, W. (1793-a). *Cheiranthus Mutabilis*. Changeable Wall-Flower. *The Botanical Magazine* 6: 195.
- CURTIS, W. (1793-b). Geranium Anemonefolium. Anemone-Leav'd Geranium. The Botanical Magazine 6: 206.
- CURTIS, W. (1794-a). *Disandra Prostrata*. Trailing Disandra. *The Botanical Magazine* 7: 218.
- CURTIS, W. (1794-b). Jasminum Odoratissimum. Sweetest Jasmine. The Botanical Magazine 8: 285.
- CURTIS, W. (1795). *Sempervivum Tortuosum*. Gouty Houseleek. *The Botanical Magazine* 9: 296.
- CURTIS, W. (1798-a). *Lavandula Pinnata*. Pinnated Lavender. *The Botanical Magazine* 12: 401.
- CURTIS, W. (1798-b). *Cineraria Cruenta*. Purple-Leaved Cineraria. *The Botanical Magazine* 12: 406.
- CURTIS, W. (1798-c). Cytisus Foliolosus. Leafy Cytisus. The Botanical Magazine 12: 426.
- CURTIS, W. (1799). *Canarina Campanula*. Canary Bell-Flower. *The Botanical Magazine* 13: 444.
- DE CANDOLLE, A. P. (1799-a). Plantarum historia succulentarum. Fasc. 1. Paris.
- DE CANDOLLE, A. P. (1799-b). Plantarum historia succulentarum. Fasc. 2. Paris.
- DE JUANA, J. I. (2013). Errores y confusiones sobre *Jasminum azoricum* L. *Bouteloua* 16: 17-22.

- DE PAZ-SÁNCHEZ, M. A. (2004). Un drago en El Jardín de las Delicias. Pp. 13-109. In: M. A. de Paz-Sánchez (ed.). *Flandes y Canarias. Nuestros orígenes nórdicos. Vol. I.* Santa Cruz de Tenerife: Centro de la Cultura Popular Canaria.
- DE URIARTE, C. G., C. CURELL, M. PRIVAT, A. M. REAL & C. BADÍA (2000). *Viajeros france*ses a las Islas Canarias. *Repertorio bio-bibliográfico y selección de textos*. La Laguna: Instituto de Estudios Canarios [project directors: B. Pico & D. Corbella].

DILLENIUS, J. J. (1732). Hortus Elthamensis. London.

- DIOSCORIDES, P. (c. 512). *Planta medica*. [Oldest known copy was made in Constantinople in ~512 and it is known as *Vienna Dioscurides* and it is found in the Österreichische Nationalbibliothek, Vienna].
- EDWARDS, P. (1983). Plants of Madeira, Brazil and Tierra del Fuego. Pp. 46-75. In: D. J. Carr (ed.). Sydney Parkinson. Artist of Cook's Endeavour voyage. London & Canberra: British Museum (Natural History) & Croom Helm Limited.
- FEUILLÉE, L. (1724). Voyage aus Isles Canaries ou journal des observations physiques, mathematiques, botaniques et historiques. Original manuscript found in the Natural History Museum, Paris [Ms. 38. Facsimile was published by Herrera Piqué (2006-b)].

FORSTER, J. R & J. G. A. FORSTER (1775). Characteres generum plantarum. Ed. 1. London.

- FORSTER, J. G. A. (1789). Plantae Atlanticae ex insulis Madeira, Sti Jacobi, Adscencionis, Stae Helenae et Fayal reportatae. *Commentationes Societatis Regiae Scientiarum Gottingensis* 9: 46-74.
- FRANCISCO-ORTEGA, J. & A. SANTOS-GUERRA. (1999). Early evidence of plant hunting in the Canary Islands from 1694. *Archives of Natural History* 26: 239-267.
- FRANCISCO-ORTEGA, J., M. T. JACKSON, A. SANTOS-GUERRA & M. FERNÁNDEZ-GALVÁN (1991). Historical aspects of the origin and distribution of tagasaste (*Chamaecytisus proliferus* (L. fil.) Link ssp. *palmensis* (Christ) Kunkel), a fodder tree from the Canary Islands. *Journal of the Adelaide Botanical Garden* 14: 67-76.

FRANCISCO-ORTEGA, J., H. J. NEWBURY & B. V. FORD-LLOYD (1993). Tagasaste in the Canary Islands in the 17th century. *Journal of the Adelaide Botanical Garden* 15: 87-92.

- FRANCISCO-ORTEGA, J., A. SANTOS-GUERRA & C. E. JARVIS (1994). Pre-Linnaean references for the Macaronesian flora found in Leonard Plukenet's works and collections. *Bulletin of the Natural History Museum London, Botany* 24: 1-34.
- FRANCISCO-ORTEGA, J., A. SANTOS-GUERRA, C. E. JARVIS, M. A. CARINE & M. MAUNDER (2011). Los herbarios más antiguos de las Islas Canarias. *Makaronesia* 13: 98-111.
- FRANCISCO-ORTEGA, J., A. SANTOS-GUERRA, M. A. CARINE & C. E. JARVIS (2008). Plant hunting in Macaronesia by Francis Masson: The plants sent to Linnaeus and Linnaeus filius. *Botanical Journal of the Linnean Society* 157: 393-428.
- FRANCISCO-ORTEGA, J., A. SANTOS-GUERRA, M. A. CARINE, & C. E. JARVIS (2009). Francis Masson y los primeros estudios taxonómicos modernos de la flora macaronésica. *El Indiferente* 20: 3-11.
- FRANCISCO-ORTEGA, J., A. SANTOS-GUERRA, C. E. JARVIS, M. A. CARINE, M. M. SEQUEIRA & M. MAUNDER (2010). Early British collectors of the Macaronesian flora: From Sloane to Darwin. Pp. 125-141. In: S. Knapp & D. M. Williams (eds.). *Beyond cladistics: The branching of a paradigm*. Berkeley: University of California Press.

- FRANCISCO-ORTEGA, J., A. SANTOS-GUERRA, L. SÁNCHEZ-PINTO & M. MAUNDER (2012). Early cultivation of Macaronesian plants in three European botanic gardens. *Revista de la Academia Canaria de Ciencias* 23: 113-143.
- FRANCISCO-ORTEGA, J., A. SANTOS-GUERRA, M. M. ROMEIRAS, M. A. CARINE, L. SÁNCHEZ-PINTO & M. C. DUARTE (2015). The botany of the three voyages of Captain James Cook in Macaronesia: An introduction. *Revista de la Academia Canaria de Ciencias* 27: 357-410.
- FRANCISCO-ORTEGA, J., L. BROILLET, A. SANTOS-GUERRA, L. SÁNCHEZ-PINTO, B. JESTROW & S. ZONA (in press). El Hermano Marie-Victorin: Desde Canadá a Canarias en un periplo botánico por tres continentes durante 1929. *Makaronesia*.
- GERARD, J. (1597). The herball or generic historie of plantes [Ed. 1]. London: Iohn Norton.
- GERARD, J. (1633). *The herball or generic historie of plantes* [Ed. 2]. London: Adam Filip Joice Norton & Richard Whitakers.
- GIBBS, P. E. (1974). Taxonomic notes on some Canary Island and North African species of *Cytisus* and *Genista*. *Lagascalia* 4: 33-41.
- GIODA, A., Z. HERNÁNDEZ, E. GONZÁLEZ & R. ESPEJO (1995). Fountain trees in the Canary Islands: Legend and reality. *Advances in Horticultural Sciences* 9: 112-118.
- GIRET, A. (1977). La mission scientifique du Capitaine de Vaisseau Borda au Pic de Ténériffe 1776-1777. L'Astronomie 91: 469-472.
- GONZÁLEZ ARAÑA, P. (2005). La ilustración científica de la *Dracaena draco* de Canarias (1576-1970). *Bellas Artes* 3: 169-190.
- HANSEN, A. & P. SUNDING (1993). Flora of Macaronesia. Checklist of vascular plants. Ed. 4. Sommerfeltia 17: 1-295.
- HAWKES, J. G. & J. FRANCISCO-ORTEGA (1993). The early history of the potato in Europe. *Euphytica* 70: 1-7.
- HE, L. J. & X.-C. ZHANG (2012). Exploring generic delimitations within the fern family Thelypteridaceae. *Molecular Phylogenetics and Evolution* 65: 757-764.
- HERNÁNDEZ BELLO, S., M. L. BAJO SEGURA & J. M. FERNÁNDEZ-PALACIOS (2012). Ilustración científica en las Islas Canarias. Imágenes sobre biología y geología (siglos XVII-XIX). Boletín de la Real Sociedad Económica de Amigos del País de Tenerife 2012: 225-257.
- HERNÁNDEZ GUTIÉRREZ, A. S. (1998). *Garoé. Iconografía del Árbol del Agua*. Gobierno de Canarias [serie *Estudios Prehispánicos Vol. 5*].
- HERRERA PIQUÉ, A. (1982). Estancia en las Islas Canarias de Louis Feuillée, pionero de la exploración científico natural de este archipiélago (1724). Pp. 742-761. In: F. Morales Padrón (ed.). *IV Coloquio de Historia Canario-Americana. Vol. 2* (1980). Las Palmas de Gran Canaria: Cabildo de Gran Canaria & Casa de Colón.
- HERRERA PIQUÉ, A. (1987). Las Islas Canarias, escala científica en el Atlántico. Viajeros y naturalistas en el siglo XVIII. Madrid: Editorial Rueda.
- HERRERA PIQUÉ, A. (2006-a). *Pasión y aventura en la ciencia de las luces. Vol. 1*. Las Palmas de Gran Canaria: Cabildo de Gran Canaria.
- HERRERA PIQUÉ, A. (2006-b). *Pasión y aventura en la ciencia de las luces. Vol. 2*. Las Palmas de Gran Canaria: Cabildo de Gran Canaria [this volume includes a facsimile of the unpublished manuscript by L. Feuillée (1724)].
- HERRERA PIQUÉ, A. (2011). El drago. Madrid: Editorial Rueda.

- HOARE, M. E., ED. (1982). The Resolution *journal of Johann Reinhold Forster 1772-1775*. *Vols. 1-4*. London: The Hakluyt Society.
- HUMBOLDT, A. VON (1810-1813). Vues des cordillères, et monumens des peuples indigènes de l'Amérique [Voyage aux Régions Équinoxiales. Part 1. Sect. 2]. Paris: F. Schoell.
- JACQUIN, N. J. VON (1776). *Hortus botanicus vindobonensis. Vol. 3*. Wien: Josephi Michaelis Gerold.
- JACQUIN, N. J. VON (1781-1787). *Icones plantarum rariorum. Vol. 1. Fascs. 1-7/8.* Wien: Christianum Fridericum Wappler.
- JACQUIN, N. J. VON (1781-a). *Icones plantarum rariorum. Vol. 1. Fasc.1*. Wien: Christianum Fridericum Wappler.
- JACQUIN, N. J. VON (1781-b). Miscellanea austriaca. Vol. 2. Wien: ex oficina Krausiana.
- JACQUIN, N. J. VON (1782). *Icones plantarum rariorum. Vol. 1. Fasc. 2.* Wien: Christianum Fridericum Wappler.
- JACQUIN, N. J. VON (1783). *Icones plantarum rariorum. Vol. 1. Fasc. 3.* Wien: Christianum Fridericum Wappler.
- JACQUIN, N. J. VON (1784). *Icones plantarum rariorum. Vol. 1. Fasc. 4.* Wien: Christianum Fridericum Wappler.
- JACQUIN, N. J. VON (1787). Collectanea at botanicam. Vol. 1. Wien: ex officina Wappleriana.
- JACQUIN, N. J. VON (1797-a). *Plantarum rariorum horti caesarei schoenbrunnensis. Vol. 1.* Wien: C. F. Wappler.
- JACQUIN, N. J. VON (1797-b). *Plantarum rariorum horti caesarei schoenbrunnensis. Vol. 2.* Wien: C. F. Wappler.
- JACQUIN, N. J. VON (1798). *Plantarum rariorum horti caesarei schoenbrunnensis. Vol. 3*. Wien: C. F. Wappler.
- JANGOUX, M., ED. (2009). Nicolas Baudin. Journal du voyage aux Antilles de la Belle Angélique (1796-1798). Collection Imago Mundi Série Textes. Paris & Brussels: Université Paris'Sorbone & Académie Royale de Belgique [this work includes a transcription of two manuscripts by N. Baudin (1796-1798)].
- JARDIM, R. & M. M. SEQUEIRA (2008). List of vascular plants (Pteridophyta and Spermatophyta). Pp. 13-25. In: P. A. V. Borges, C. Abreu, A. M. F. Aguiar, P. Carvalho, R. Jardim, I. Melo, P. Oliveira, C. Sérgio, A. R. M. Serrano & P. Vieira (eds.). A list of the terrestrial fungi, flora and fauna of Madeira and Selvagens archipelagos. Funchal & Angra do Heroísmo: Direcção Regional do Ambiente da Madeira & Universidade dos Açores.
- JARVIS, C. E. & P. H. OSWALD (2014). The collecting activities of James Cuninghame FRS on the voyage of *Tuscan* to China (Amoy) between 1697 and 1699. *Notes and Records: The Royal Society Journal of the History of Science* 69: 135-153.
- JOHNSTON, S. H. JR. (1992). *The Cleveland herbal, botanical, and horticultural collections*. Kent, Ohio: The Kent State University Press.
- KEELER, N. (2009). *Gardens in perpetual bloom. Botanical illustrations in Europe and America 1600-1850.* Boston: Museum of Fine Arts.
- LEDRU, A. P. (1797). Catalogue dressé suivant la nouvelle méthode de Jussieu des plantes recueillies dans l'isle de Ténériffe, depuis le 16 brumaire l'an 4 [6 November 1796] jusqu'au 16 ventôse l'an 5 [6 March 1797], par Ledru. Original manuscript found in the Natural History Museum, Paris [Ms. 2547. Unpublished manuscript].

- LEDRU, A. P. (1810). Voyage aux Iles de Ténériffe, La Trinité, Saint-Thomas, Sainte-Croix et Porto-Ricco. Paris: Arthus Bertrand.
- L'HÉRITIER, C. L. (1786). *Stirpes novae descriptionius et iconibus illustratae. Fasc. 2.* Paris: Philippi-Dionysii Pierres.
- L'HÉRITIER, C. L. (1787-1788). Geraniologia. Paris: Petri-Francisci Didot.
- L'HÉRITIER, C. L. (1788-a). Sur la Monetia, la Verbena globiflora & l'Urtica arborea. Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts 33: 53-56.
- L'HÉRITIER, C. L. (1788-b). *Stirpes novae descriptionius et iconibus illustratae. Fasc. 4.* Paris: Philippi-Dionysii Pierres.
- L'HÉRITIER, C. L. (1789). Sertum anglicum. Fasc. 1. Paris: Petri-Francisci Didot.
- L'HÉRITIER, C. L. (1790). Sertum anglicum. Fasc. 2. Paris: Petri-Francisci Didot.
- L'HÉRITIER, C. L. (1791-a). *Stirpes novae descriptionibus et iconibus illustratae. Fasc. 6.* Paris: Philippi-Dionysii Pierres.
- L'HÉRITIER, C. L. (1791-b). *Stirpes novae descriptionibus et iconibus illustratae. Conspectus.* Paris: Philippi-Dionysii Pierres.
- L'HÉRITIER, C. L. (1792-a). Sertum anglicum. Fasc. 3. Paris: Petri-Francisci Didot.
- L'HÉRITIER, C. L. (1792-b). Sertum anglicum. Fasc. 4. Paris: Petri-Francisci Didot.
- L'HÉRITIER, C. L. (1805). *Stirpes novae descriptionius et iconibus illustratae. Fasc.* 7. Paris: Philippi-Dionysii Pierres.
- L'HÉRITIER, C. L. (1963). *Sertum anglicum*. Pittsburgh: The Hunt Botanical Library [Facsimile with critical studies and a translation. The Hunt Facsimile Series Number 1, editor G. H. M. Lawrence].
- LINNAEUS, C. (1738). Hortus Cliffortianus. Amsterdam.
- LINNAEUS, C. (1753). Species plantarum. Ed. 1. Stockholm: Laurentii Salvii.
- L'OBEL, M. DE (1576). Plantarum seu stirpium historia. Antwerpen: Christophori Plantini.
- LOURTEIG, A. (1966). L'herbier de Paul Hermann, base du *Thesaurus zeylanicus* de Johan Burman. *Taxon* 15: 23-32.
- LOWE, R. T. (1862). A manual flora of Madeira. Vol. 1. Part 2. London: John van Voorst.
- MABBERLEY, D. J. (1981). The name of the Madeiran *Maytenus* (Celastraceae). *Taxon* 30: 485-486.
- MARTÍN RODRÍGUEZ, F. G. (1986). *La primera imagen de Canarias. Los dibujos de Leonardo Torriani*. Santa Cruz de Tenerife: Colegio Oficial de Arquitectos de Canarias.
- MENEZES, C. A. (1909). Contribuções para o estudo da flora do Archipelago da Madeira. Boraginaceas, Escrophulariaceas, Plantaginaceas, Amarantaceas, Chenopodiaceas, Polvgonaceas, Urticaceas, Orchidaceas e Juncaceas. Funchal: Diario do Commercio.
- MORALES LEZCANO, V. (1965). "La Ilustración" en Canarias. Anuario de Estudios Atlánticos 11: 103-127.
- MOREL, N. (2007). Itinéraire scientifique du botaniste André-Pierre Ledru. Pp. 131-149. In: A. Relancio Menéndez & M. Ruiz Pacheco (eds.). *Canarias, territorio de exploraciones científicas*. Madrid: Consejo Superior de Investigaciones Científicas.
- MORISON, R. (1699). *Plantarum historiae universalis Oxoniensis. Pars tertia*. Oxford: E. Theathro Sheldoniano.
- MUNTING, A. (1696). *Naauwkeurige beschrijving der aardgewassen. Vol. 1*. Utrecht & Leiden: Francois Halma & Pieter Vander AA.

- NETO, A. I., D. C. CRAVO & R. T. HAROUN (2001). Checklist of the benthic marine plants of the Madeira Archipelago. *Botanica Marina* 44: 391-414.
- NICKELSEN, K. (2006). Draughtsmen, botanists and nature: Constructing eighteenth-century botanical illustrations. *Studies in History and Philosophy of Biological and Biomedical Sciences* 37: 1-25.
- NISSOLE, G. (1711). Etablissement de quelques nouveaux genres des plantes. *Mémoires de Mathématique et de Pyhsique de L'Academie Royales des Sciences, Academie Royale des Sciences* 1711: 316-320.
- OLIVER, F. W., ED. (1913). Makers of British botany. London: Cambridge University Press.

OSKAMP, D. L. (1796). Afbeeldingen der artseny-gewassen met derzelver Nederduitsche en Latynsche beschryvingen. Vol. 2. Amsterdam: J. C. Sepp en Zoon.

- PETIVER, J. (1699). *Musei petiveriani centuria quarta & quinta, rariora naturae continens*. London: S. Smith and B. Walford.
- PETIVER, J. (1702). Gazophylacii naturae & artis decas prima. London: Christ. Bateman.
- PETIVER, J. (1709). Catalogus classicus & topicus omnium rerum figuratum in v. decadibus, seu primo volumine. Gazophylacii naturae & artis; singulis ad proprias tabulas & numeros relatis. London: Christ. Bateman.
- PLUKENET, L. (1692). Phytographia sive illustriorum. Pars tertia. London.
- PLUKENET, L. (1694). Phytographia sive illustriorum. Pars quarta. London.

PLUKENET, L. (1696). Almagestum botanicum sive phytographiae Pluc'netianae. London.

- PLUKENET, L. (1700). Almagesti botanici mantissa. London.
- PLUKENET, L. (1705). Amaltheum botanicum. London.

POLATSCHEK, A. (2014). Revision der gattung *Erysimum* (Cruciferae): Nachträge su den bearbeitungen der Iberischen Halbinsel und Makaronesiens. *Annalen des Naturhistorischen Museums in Wien, B* 116: 87-105.

- PORTOLES I SANZ, M. (2004). Cavanilles, el botánico de la Ilustración. Pp. 315-326. In: Real Sociedad Económica de Amigos del País (ed.). Antonio José Cavanilles (1745-1804). Segundo centenario de la muerte de un gran botánico. Valencia: Real Sociedad Económica de Amigos del País.
- PRESS, J. R. & M. J. SHORT, EDS. (1994). *Flora of Madeira*. London: The Natural History Museum.
- PUIG-SAMPER, M. A. & F. PELAYO LÓPEZ (1997). El viaje del astrónomo y naturalista Louis Feuillée a las Islas Canarias (1724). La Laguna: Ayuntamiento de La Laguna & Centro de la Cultura Popular Canaria.
- QUINBY, J. (1958). Catalogue of botanical books in the collection of Rachel McMasters Miller Hunt. Vol. 1. Printed books 1477-1700. Pittsburgh: The Hunt Botanical Library.
- ROMEIRAS, M. M., M. C. DUARTE, A. SANTOS-GUERRA, M. A. CARINE & J. FRANCISCO-OR-TEGA (2014). Botanical exploration of the Cape Verde Islands: From the pre-Linnaean records and collections to the late 18th century floristic accounts and expeditions. *Taxon* 30: 625-640.
- RÖMER, J. J. (1796). Scriptores de plantis Hispanicis, Lusitanicis, Brasiliensibus: Adornavit et recudi curavit. Nuremberg: Officina Raspeana.
- SÁNCHEZ-PINTO, L. (1980-a). Las orchillas de Canarias 1. Historia. Aguayro 121: 6-10.

- SANCHEZ-PINTO, L. (1980-b). Las orchillas de Canarias y 2. Taxonomía y ecología. *Aguayro* 122: 6-7.
- SANCHEZ-PINTO, L. (1993). An unknown herbarium of Canary plants: The collection of Oskar Burchard. *Webbia* 48: 439-443.
- SÁNCHEZ-PINTO, L. (2004). Recolectores de plantas en La Orotava. El Indiferente 16: 4-11.
- SANTIAGO-VALENTÍN, E., L. SÁNCHEZ-PINTO & J. FRANCISCO-ORTEGA (2015). Domingo Bello y Espinosa (1817-1884) and the new taxa published in his *Apuntes para la flora de Puerto-Rico. Taxon* 64: 323-349.
- SANTOS-GUERRA, A. (1993). La botánica Canaria y los prelinneanos (segunda mitad del siglo XVII y primera del XVIII). Pp. 205-212. In: Anonymous (ed.). *I encuentro de geografía, historia y arte de la ciudad de Santa Cruz de La Palma*. Santa Cruz de La Palma: Cabildo Insular de La Palma.
- SANTOS-GUERRA, A. (2006). Botánica. Pp. 621-625. In: A. Herrera Piqué (ed.). *Pasión y aventura en la ciencia de las luces. Vol. 2*. Las Palmas de Gran Canaria: Cabildo de Gran Canaria.
- SANTOS-GUERRA, A. (2008). Paseando entre jardines. Rincones del Atlántico 5: 194-257.
- SANTOS-GUERRA, A. (2009). Iconografías draconianas: Paseos por el arte y la ciencia. *Rincones del Atlántico* 6/7: 166-179.
- SANTOS-GUERRA, A., C. E. JARVIS, M. A. CARINE, M. MAUNDER & J. FRANCISCO-ORTEGA (2011). Late 17th century herbarium collections from the Canary Islands: The plants collected by James Cuninghame in La Palma. *Taxon* 60: 1734-1753.
- SCHNEEVOOGT, G. V. (1793). Icones plantarum rariorum. Part 8. Haarlem: Bij. C. Plaat.
- SCHUBERT, B. G. (1945). Publication of Jacquin's *Icones Platarum Rariorum*. Contributions from the Gray Herbarium of Harvard University 154: 3-23.
- SEBA, A. (1735). Locupletissimi rerum naturalium thesauri accurata descriptio. Tomus II. Amsterdam.
- SHERWOOD, S., ED. (2005). *A new flowering: 1000 years of botanical art*. Oxford: The Ashmolean Museum, University of Oxford.
- SEQUEIRA, M. M, A. SANTOS-GUERRA, C. E. JARVIS, A. OBERLI, M. A. CARINE, M. MAUN-DER & J. FRANCISCO-ORTEGA (2010-a). The Madeiran plants collected by Sir Hans Sloane in 1687, and his descriptions. *Taxon* 59: 598-612.
- SEQUEIRA, M. M., D. ESPÍRITO-SANTO, C. AGUIAR, J. CAPELO & J. HONRADO, COORDINA-TORS. (2010-b). Checklist da Flora de Portugal (Continental, Açores e Madeira). Associação Lusitana de Fitossociologia (ALFA).
- SHERWOOD, S., ED. (2005). 1000 years of botanical art. Oxford: The Ashmolean Museum.
- SKUNCKE, M.-C. (2008). Linnaeus: An 18th century background. *The Linnean Special Issue* 8: 19-26.
- SLOANE, H. (1696). Catalogus plantarum quae in insula Jamaica sponte proveniunt. London: D. Brown.
- SLOANE, H. (1707). A voyage to the islands Madera, Barbados, Nieves, S. Christophers and Jamaica. Vol. 1. London: British Museum.
- SLOANE, H. (1725). A voyage to the islands Madera, Barbados, Nieves, S. Christophers and Jamaica. Vol. 2. London: British Museum.

- SMITH, J. E. (1793). *Icones pictae plantarum rariorum descriptionibus et observationibus illustratae*. Plates 13-18. London: J. Davis.
- SMITH, P. H. (2006). Art, science, and visual culture in early modern Europe. Isis 97: 83-100.
- STEARN, W. T. (1990). Schneevoogt and Schwegman's 'Icones Plantarum Rariorum.' Journal of Botany 78: 66-74.
- STEARN, W. T. (1990). Botanical masters. New York: Prentice Hall Editions.
- STEARN, W. T., S. WILSON & H. BUCHANAN (1990). The bibliography. Pp. 69-161. In: S. Sacheverell & W. Blunt (eds.). Great flower books, 1700-1900: A bibliographic record of two centuries of finely-illustrated flower book [new revised edition, bibliography edited by P. M. Synge]. New York: The Atlantic Monthly Press.
- STEVENSON, A. (1961). Catalogue of botanical books in the collection of Rachel McMasters Miller Hunt. Vol. 2. Part 2. Printed books 1701-1800. Pittsburgh: The Hunt Botanical Library.
- THE ANGIOSPERM PHYLOGENY GROUP (2009). An update of the Angiosperm Phylogeny Group classification for the orders and families of flowering plants: APG III. *Botanical Journal of the Linnean Society* 161: 105-121.
- TORRIANI, L. (1592). Alla Maesta del Re Catolico. Descrittione et historia del regno de L'Isole Canarie gia dette le Fortunate con il parere delle loro fortificationi. Original manuscript found at University of Coimbra Library [Ms. 314. Transcription of the manuscript was published by Cioranescu (1999)].
- UPSON, T. & S. ANDREWS (2004). The genus *Lavandula*. Kew: The Board of Trustees of the Royal Botanic Gardens.
- VAN DEN HEEDE, C. J., R. L. L VIANE & M. W. Chase (2002). Phylogenetic analysis of Asplenium subgenus Ceterach (Pteridophyta: Aspleniaceae) based on plastid and nuclear ribosomal ITS DNA sequences. American Journal of Botany 90: 481-495.
- VANDELLI, D. (1768). *Dissertatio de arbore draconis seu Dracaena*. Lisbon: Antonium Rodericium Galliardum Typographum Regiae Curiae Censoriae.
- VOLCKAMER, J. G. (1700). Flora noribergensis. Nuremberg: Michaellianis.
- WACHTER, O. (1962). The restoration of the 'Vienna Dioscorides'. *Studies in Conservation* 7: 22-26.
- WALTHER, A. F. (1735). *Designatio plantarum quas Hortus August. Friderici Waltheri*. Leipzig: Joh. Frid. Gleditschii B. filium.
- WEINMANN, J. W. (1742). *Phytanthoza iconographia*. Vol. 3. Regensburg: Hieronymum Lenzium.
- WEINMANN, J. W. (1745). *Phytanthoza iconographia. Vol. 4.* Regensburg: Henricum Georgium Neubauerum.
- WENDLAND, J. C. (1789). Zeichnung von 181 Stueck ausländischer Pflanzen welche sich auf dem Koenigl. berggarten zu Herrnhausen bei Hannover befinden. Hannover: Gottfried Wilhelm Leibniz Bibliothek [Ms KGBH-49,2. Unpublished manuscript.].
- WIJNANDS, D. O. (1983). The Botany of the Commelins. Rotterdam: A. A. Balkema.
- WIKLUND, A. (1992). The genus *Cynara* L. (Asteraceae-Cardueae). *Botanical Journal of the Linnean Society* 109: 75-123.
- ZAKAI, A. (2006). The Age of Enlightenment. Pp. 80-99. In: S. Stein (ed.). *The Cambridge companion to Jonathan Edwards*. New York: Cambridge University Press.