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The Expedition to Peru and Chile (1777–1788): Inventory of scientific production

A. González Bueno and R. Rodríguez Nozal

Abstract

The aim of this work is to provide an inventory of the scientific corpus produced by the Spanish members of the Expedition to Peru and Chile (1777–1788). This material is divided into six large sections. The first section covers the different versions of the diary of the journey taken by the Expedition. The second section covers the drafts and workbooks used by the Expedition members for the writing of “Flora Peruviana et Chilensis,” the manuscripts and published editions of this work, the materials used in the preparation of both the “Prodromus” and the “Systema Vegetabilium,” the contributions of the assistants on the Expedition and some monographs of taxonomic interest. The third section is dedicated to quinological studies and other pharmacological works undertaken by Hipólito Ruiz López and José Pavón Jiménez. The fourth section includes the writings concerning Ruiz’s dispute with Antonio José Cavanilles. The fifth section contains texts which set forth the botanical thought of the members of the Expedition. The sixth and final section includes the Expedition members’ writings on various subjects, from anthropology and ethnography to others of a purely historical nature.

Introduction

The botanical Expedition to the kingdoms of Peru and Chile was included in the plans drawn up by the French Physiocrat Anne Robert Jacques Turgot, who was searching for useful plants that could be adapted for commercial uses in France. The basis of the idea is the same as that which inspired the voyage of Saint Emond to India or of the Abbot François Rozier to Corsica. The arrangements for obtaining the necessary permit for this journey from the Spanish crown fell to the Cluny government. The person selected by the French Court for this Expedition was the doctor Joseph Dombey, an expert botanist who enjoyed the support of the Jardin du Roi in Paris.

Dombey arrived in Madrid in the autumn of 1776. In April 1777 the royal credentials were granted for the botanists Hipólito Ruiz López (Figure 1) and José Pavón Jiménez and the draftsmen José Brunete and Isidro Gálvez. According to the plan, Dombey would travel “in the capacity of companion to the Spaniards of the same profession.” The Expedition’s Spanish botanists were chosen by Casimiro Gómez Ortega, the first Professor of the Real Jardín Botánico of Madrid.

The Expedition embarked from the Spanish port of Cadiz in October 1777, and six months later the members arrived in El Callao. In December 1781 a new destination for the Expedition was posted: Chile. There they remained until November 1783, when the Expedition members returned to the port of El Callao. In April 1784, Dombey embarked for Cadiz, where on his arrival he was subjected to a thorough and prolonged border search, directed by Gómez Ortega; four years later, in March 1788, Ruiz, Pavón and Gálvez (Brunete died in Pasco, Peru, in May 1787) embarked from El Callao for Cadiz.

On their return to Spain, the members of the Expedition worked on the material that had been collected. In 1792 they moved into their own quarters, the “Casa de la Flora”; six years later, in 1798, the first volume of a huge publishing venture appeared: the “Flora Peruviana et Chilensis,” which continued until 1802 and of which only the first three volumes appeared in print. In 1794 a “Prodromus” with descriptions of the new genera that
had been discovered was published, a foretaste of the main botanical novelties. The project was halted at the beginning of the nineteenth century, due to a lack of political and economic sponsorship which was the cause of a long agony aggravated by the Peninsular War; in 1831 the Junta Protectora of the Museo de Ciencias Naturales obtained definitive custody of the property of the “Casa de la Flora.”

This article is intended to be an inventory of all the works, both handwritten manuscripts and published volumes, produced by the members of the Spanish Expedition to Peru and Chile. We have arranged them in six sections, in an attempt to determine the different scientific objectives pursued by Hipólito Ruiz and José Pavón throughout their careers:

1. The “Travel Diary”
2. The Preliminary Works for the “Flora Peruana”
   2.1 The “Flora Ruiziana”
   2.2 The “Work notebooks”
   2.3. The “Prodromus”
   2.4. The “Systema Vegetabilium”
   2.5 The Contributions of Assistants of the Expedition to Peru
   2.6. The “Flora Peruana”
   2.7. The Announcements of the “Flora Peruana”
   2.8. Monographs of Taxonomic Interest
3. Quinological Studies and Other Pharmacological Works
   3.1. Quinological Studies
   3.2. Other Works of Pharmacological Nature
4. The Dispute with A. J. Cavanilles
5. Botanical Texts

The works are arranged chronologically within each section, and each handwritten manuscript appears together with the corresponding published version:

We used these abbreviations for archives and institutions:

—R.A.C. Archive: Archivo Real Academia de Ciencias de Madrid.
—R.A.M.M. Archive: Archivo Real Academia de Medicina de Madrid.

We did at all times render titles of manuscripts and books exactly as they appear on the title pages, which means that spelling, capitalization, punctuation, abbreviations, un-
derlining, superscripts and subscripts may be irregular or may not conform to current usage, and the same words may be spelled differently in different sources ("Flora Peruana" and "Flora Peruviana," for example). When a source lacks a formal title, a supplied title—a title under which the work traditionally has been known to scholars or an assigned title based on the subject matter or content of the manuscript—has been given in brackets. The pagination of texts is indicated in two different ways, either by page numbers, in which case we use the abbreviation "pp," or by folio numbers, in which case we use "ff." We have inserted "[MS]" before some titles of sources to indicate that they are manuscripts rather than printed books; titles of printed books are italicized. Within each numbered section of this article, each source has its own alphabetical code—e.g., 2.1.A. These codes are used as a notation system to direct the reader from source to source.

1. The "Travel diary"


—Private collection (unseen). This probably formed part of the legacy of Ruiz, or his descendants, given to "Mr. Hernando."

—Quoted by Villar y Miguel (1890).

—This work must have been written between the first date noted (19 September 1777) and the last one (6 April 1778).


—First draft of the "Travel Diary" by Ruiz.

—We indicate the date of the Expedition as the beginning of this work, and give as its completion the year noted by Barreiro (1931, p. 507).

—Published in an edition by Barreiro (1931) (1.C).

C. Ruiz López, H. [A. Barreiro, ed.]. 1931. Relación del Viaje hecho a los Reynos del Perú y Chile por los botánicos y dibuxantes enviados para aquella Expedición, extractada de los diarios por el orden que llevó en éstos su autor... Publicado por primera vez... revisada y anotada por... Madrid: Est. Tipográfico Huelves y Compañía. Pp. [1]–588.

—The original manuscript is in the M.N.C.N. Archive (1.B).

—A translation into English by Dahlgren (1940) (1.D).

—An edition, on manuscripts other than those used by Barreiro, published by Jaramillo-Arango (1952) (1.H).


E. Ruiz López, H. [1793–1801]. [MS] Relación historica del Viaje, que hizo à los Reynos del Perú y Chile el Botânico Dº Hipólito Ruiz en el año de 1777 hasta el de 1788, en cuya epoca regresó a Madrid.

B.M. (N.H.), MSS Rui 2b g 5. 88 pp. (completed copy); bound manuscript, folio.

—Second copy of the "Travel Diary" by Ruiz.

—The beginning and ending dates of this manuscript are those provided by Jaramillo-Arango (1952, pp. 21–44).
Arango (1952) (1.H); the descriptions of Lima and Huanuco de los Caballeros have also been published independently by Jaramillo-Arango (1949) (1.G).


—The original manuscript is in the B.M. (N.H.) (1.F); it is part of the “Travel Diary” by Ruiz, missing from Barreiro’s edition, and present in the manuscript published three years later by Jaramillo-Arango.

H. Ruiz López, H. [J. Jaramillo-Arango, ed.]. 1952. Relación histórica del Viaje, que hizo a los Reynos del Perú y Chile el Botánico ... en el año de 1777 hasta el de 1788, en cuya época regresó a Madrid. Madrid: Talleres Gráficos de Cándido Bermejo.


—The original manuscripts are in the B.M. (N.H.) (1.E, 1.F).

2. The preliminary works for the “Flora Peruana”

2.1. The “Flora Ruiziana”


—Pages 301–306 include an “Index Nomium Genericorum et Specificorum.”


—The years 1777 and 1785, with which we have dated the manuscript, correspond to the beginning of the Expedition.
and the dispatch of this work to the Secretary of State and the Office of the Indies, José de Gálvez.

2.2 The “Work notebooks”


R.J.B.M. Archive, division IV, file 7,2.
Pp. [I], 1–516, 517–527, 528 pp. (many of them blank); 12 booklets, folio.
—Sheets 517–527 include an “Index Nominum Indicorum, et Hispanicorum.”
—“Work notebook” (González Bueno 1995) written by Pavón; contains classes I–XXIV corresponding to Species plantarum by Linnaeus.
—This is considered a “Work notebook,” so the proposed dates correspond to the period of the Expedition to America.


R.J.B.M. Archive, division IV, file 1,1.
Pp. [I–II], 1–558, [559–560]; bound manuscript, folio.
—Volume 1 of the first “Madrid series” of the “Work notebooks” by Ruiz; contains classes I–XIV (pro parte) corresponding to Species plantarum by Linnaeus.
—The name José Pavón appears, in his own hand, inserted in the title; the rest of the text is in Ruiz’s handwriting.


R.J.B.M. Archive, division IV, file 1,2.
Pp. [I–II], 559–908, 909–912, [913–950], [951–952], [953–968]; bound manuscript, folio.
—Pages [913–950] include an “Index Generum et Specierum” and pages [953–968] contain an “Indice de los Nombres Indicos y Patrios q. tienen muchas de las Plantas en esta insertas.”
—Volume 2 of the first "Madrid series" of the "Work notebooks" by Ruiz; it contains classes XIV (pro parte)—XXIV corresponding to Species plantarum by Linnaeus.

—The name José Pavón appears, in his own hand, inserted in the title; the rest of the text is in Ruiz's handwriting.


—Pages 543–550 include an "Index Generum et Specierum" and pages 551–555 contain an "Index Nominum vulgarium sive Vernacularorum."

—Volume 1 of the second "Madrid series" of the "Work notebooks" by Ruiz; it contains classes I–XV corresponding to Species plantarum by Linnaeus.

—The name José Pavón appears, in his own hand, inserted in the title; the rest of the text is in Ruiz's handwriting.


—Pages 529–541 include an "Index Nominum Generorum, et Specificorum," and pages 543–547 contain an "Index Nominum Vulgarium sive Vernacularorum."

—Volume 2 of the second "Madrid series" of the "Work notebooks" by Ruiz; it contains classes XVI–XXIV corresponding to Species plantarum by Linnaeus.

—The name José Pavón appears, in his own hand, inserted in the title; the rest of the text is in Ruiz's handwriting.

—This is a continuation of "Volume 3" (volume 1 of the second "Madrid series") of the "Work notebooks"; for this reason we have dated this manuscript between 1784 and 1788.

F. Ruiz López, H. [1777–1788]. [MS] [Original manuscript descriptions of plants collected during their expedition to Peru and Chili [sic], with round Madrid].


—Volume 1 of the first "London series" of the "Work notebooks" by Ruiz.

—This is untitled, so we have used the descriptive title in the B.M. (N.H.) verbatim.

—The date corresponds to the Expedition to America.

G. Ruiz López, H. [1777–1788]. [MS] [Original manuscript descriptions of plants collected during their expedition to Peru and Chili [sic], with round Madrid].


—Volume 2 of the first "London series" of the "Work notebooks" by Ruiz.

—This is untitled, so we have used the descriptive title in the B.M. (N.H.) verbatim.

—The date corresponds to the Expedition to America.

H. Ruiz López, H. [1777–1788]. [MS] [Original manuscript descriptions of plants collected during their expedition to Peru and Chili [sic], with round Madrid].

B.M. (N.H.), MSS Rui 26 g 1–3.
2.3 The “Prodromus”

—First copy of the description of the genera of the “Flora Peruana,” both those genera which are published in the “Prodromus” and those already published by other authors and which finally were not included in the aforementioned “Prodromus” (2.3.D).

B. Ruiz López, H. and J. Pavón Jiménez. [1789]–1794. [MS] [Descripciones correspondientes al Florae Peruianae et Chilensis prodromus (Madrid, 1797)].
—First handwritten copy corresponding to the Florae Peruianae et Chilensis prodromus (Madrid, 1794) (2.3.D); in addition to the genera which formed part of this work, it also contains others which finally were not included in the “Prodromus.”
—The beginning date corresponds to the official initiation of work on the publication of the “Flora Peruana.”

R.J.B.M. Archive, division IV, file 9,1,3. Pp. [I], 1–76; 38 booklets, folio.
—Second handwritten copy corresponding to the Florae Peruianae et Chilensis prodromus (Madrid, 1794) (2.3.D); it only includes the genera that formed part of this work and is probably the printer’s copy.
—The beginning date corresponds to the official initiation of work on the publication of the “Flora Peruana.”

—Facsimile edition by Stafleu, in Historiae naturalis classica, t. XLIII, Lehre (J. Cra-

—Manuscript corresponding to the description of the genera not published in the Flora Peruviana et Chilensis prodromus (Madrid, 1794) (2.3.D).
—The beginning and ending dates correspond to the official initiation of work on the publication of the “Flora Peruana” and the appearance of the Flora Peruviana et Chilensis prodromus (Madrid, 1794), respectively.

2.4. The “Systema vegetabilium”


R.J.B.M. Archive, division IV, file 9,2. Pp. [i], 1–143; quarto.
—The Systema vegetabilium was published in 1798 (2.4.B).
—The beginning date corresponds to the official initiation of work on the publication of the “Flora Peruana.”


Pp. [i], [i]–VI, 1–455, [456].
2.5 The contributions of assistants on the expedition to Peru

A. Tafalla, J. 1789. [MS] Descripciones Botánicas remitidas por de Juan Tafalla en 1789 ex Provincis Lima, Cumaná, Arequipa etc.

—The materials sent to Spain by these botanists were discussed by Estrella (1989).

B. [Tafalla, J.]. [1788–1811]. [MS] [Plant descriptions].

—The work of the assistants on the Expedition to Peru began in 1788; Tafalla died in 1811. The materials sent to Spain by these botanists were discussed by Estrella (1989).


—The work of the assistants on the Expedition to Peru began in 1788; Tafalla died in 1811. The materials sent to Spain by these botanists were discussed by Estrella (1989).

2.6. The “Flora Peruana”


Not located, although it is thought that this manuscript was with the rest of the manuscripts of the “Flora Peruana” and that they were mislaid in one of the moves of the “Oficina Botánica.”

—Volume 1 of the Flora Peruana et Chilensis was published in 1798 (2.6.R).
—This manuscript was written between the official initiation of work on the publication of the “Flora Peruana” (1789) and the year of publication of the first volume of the aforementioned work (1798).


—This manuscript was written between the date of publication of the first volume of the “Flora Peruana” (1798) and the year of the move of the “Oficina Botánica” to the premises in the Real Jardín Botánico (Madrid) (1831).


—Volume 2 of the Flora Peruana et Chilensis was published in 1799 (2.6.R).
—This manuscript was written between the official date of the initiation of work on the publication of the “Flora Peruana” (1789) and the year of publication of volume 2 of the aforementioned work (1799).


—This manuscript was written between the date of publication of the second volume of the “Flora Peruana” (1799) and the
—This manuscript was written between the date of publication of the third volume of the “Flora Peruana” (1802) and the year of the move of the “Oficina Botánica” to the premises in the Real Jardín Botánico (Madrid) (1831).

—Volume 4 of the “Flora Peruana”; contains classes VIII–XII (pro parte) corresponding to Species plantarum by Linnaeus.
—Pages 2–11 correspond to the “Prefacio del Tomo 4º” of the “Flora Peruana” and pages 13–14 contain a “Lista [of the species] del Tomo 4º.”
—Published in 1957, in an edition by Álvarez López (2,6,R).
—The Laurusgraphia florae Peruvianae et Chilensis ([Bilbao, 1989]) was published separately in an edition by González Bueno and Navarro Aranda, based on these materials and those in the R.J.B.M. Archive (2,8,K).
—This manuscript was written between the official initiation of work on the publication of the “Flora Peruana” (1789) and the year in which volume 4 became ready for printing (1807).

—This manuscript was written between the

—Volume 3 of the Flora Peruviana et Chilensis was published in 1802 (2,6,R).
—This manuscript was written between the official date of the initiation of work on the publication of the “Flora Peruana” (1789) and the year of publication of volume 3 of the aforementioned work (1802).
date on which volume 4 became ready for printing (1807) and the year of the move of the “Oficina Botánica” to the premises in the Real Jardín Botánico (Madrid) (1831).


R.J.B.M. Archive, division IV, file 3,2.
Pp. [1], 1, 2–3, 4–7, 8–349; folio.
—Volume 5 of the “Flora Peruana”; contains classes XII (pro parte)—XV corresponding to Species plantarum by Linnaeus.
—Pages 2–3 contain the “Lista del tomo Quinto del Species Plantarum Florae Peruviensis et Chilensis” and pages 4–7 correspond to the preface.
—This manuscript was written between the official date of the initiation of work on the publication of the “Flora Peruana” (1789) and the year in which volume 5 became ready for printing (ca. 1807).


R.J.B.M. Archive, division IV, file 6,3.
Pp. 1–42; folio.
—This manuscript was written between the date on which volume 5 became ready for printing (ca. 1807) and the year of the move of the “Oficina Botánica” to the premises in the Real Jardín Botánico (Madrid) (1831).


R.J.B.M. Archive, division IV, file 4,1.
Pp. 1–98; folio.
—Volume 6; contains classes XVI–XVIII corresponding to Species plantarum by Linnaeus.
—This volume did not undergo the necessary final revision prior to publication, for which reason we conclude that it must have been prepared between 1789, the date of the initiation of the activities leading up to the publication of the “Flora Peruana,” and 1831, the year in which the collections of the “Oficina Botánica” were incorporated into the Real Jardín Botánico (Madrid).

L. Ruiz López, H. and J. Pavón Jiménez. [1789–1831]. [MS] [Flora Peruviensis et Chilensis.]

R.J.B.M. Archive, division IV, file 4,2.
—Volume 7; contains class XIX corresponding to Species plantarum by Linnaeus.
—This volume did not undergo the necessary final revision prior to publication, for which reason we conclude that it must have been prepared between 1789, the date of the initiation of the activities leading up to the publication of the “Flora Peruana,” and 1831, the year in which the collections of the “Oficina Botánica” were incorporated into the Real Jardín Botánico (Madrid).


Not located, although it is thought that it was with the rest of the manuscripts of the “Flora Peruana” and that it was mislaid in one of the moves of the “Oficina Botánica”: in the 1837 inventory, carried out by M. Lagasca, this volume had ceased to appear in the list of unpublished manuscripts of the “Flora Peruana.” It presumably contains class XX (pro parte) corresponding to Species plantarum by Linnae-
us, specifically *Syngenesia: Monogynia*, missing from volume 9.

N. Ruiz López, H. and J. Pavón Jiménez. [1789–1831]. [MS] [Flora Peruviana et Chilensis.]

—Volume 9; contains class XX (pro parte) corresponding to *Species plantarum* by Linnaeus.
—This volume did not undergo the necessary final revision prior to publication, for which reason we conclude that it must have been prepared between 1789, the date of the initiation of the activities leading up to the publication of the “Flora Peruana,” and 1831, the year in which the collections of the “Oficina Botánica” were incorporated into the Real Jardín Botánico (Madrid).

O. Ruiz López, H. and J. Pavón Jiménez. [1789–1831]. [MS] [Flora Peruviana et Chilensis.]

—Volume 10; contains class XXI corresponding to *Species plantarum* by Linnaeus.
—This volume did not undergo the necessary final revision prior to publication, for which reason we conclude that it must have been prepared between 1789, the date of the initiation of the activities leading up to the publication of the “Flora Peruana,” and 1831, the year in which the collections of the “Oficina Botánica” were incorporated into the Real Jardín Botánico (Madrid).

P. Ruiz López, H. and J. Pavón Jiménez. [1789–1831]. [MS] [Flora Peruviana et Chilensis.]

—Volume 11; contains classes XXII and XXIII corresponding to *Species plantarum* by Linnaeus.
—This volume did not undergo the necessary final revision prior to publication, for which reason we conclude that it must have been prepared between 1789, the date of the initiation of the activities leading up to the publication of the “Flora Peruana,” and 1831, the year in which the collections of the “Oficina Botánica” were incorporated into the Real Jardín Botánico (Madrid).

Q. Ruiz López, H. and J. Pavón Jiménez. [1789–1831]. [MS] [Flora Peruviana et Chilensis.]

—Volume 12; contains class XXIV corresponding to *Species plantarum* by Linnaeus.
—This volume did not undergo the necessary final revision prior to publication, for which reason we conclude that it must have been prepared between 1789, the date of the initiation of the activities leading up to the publication of the “Flora Peruana,” and 1831, the year in which the collections of the “Oficina Botánica” were incorporated into the Real Jardín Botánico (Madrid).


—Facsimile edition, by Stafleu, in *Historiae naturalis classica, t. XLIII*, Lehre (J. Cra-
mer), 1965. A single volume together with the first three volumes of *Flora Peruviana et Chilensis* (Madrid, 1798–1802) and the *Prodromus* (Madrid, 1794) (2.3.D).


S. Pavón Jiménez, J. 1814. [MS] Index Alphabeticus Nominum plantarum Americanarum Vernacularorum et Vulgarium Florae Peruvianae suis Generibus et speciebus respondentium.


### 2.7 The announcements of the “Flora Peruana”


### 2.8 Monographs of taxonomic interest

**A.** Ruiz López, H. [ca. 1783]. [MS] Descripción del “Pino de Chile”.


—The date of dispatch of this manuscript to Spain is recorded as 23 January 1783.

**B.** Pavón Jiménez, J. [1794]. [MS] Disertación Botanica sobre el Genero Araucaria, y sobre la reunion de otros, que Linneo publicó como distintos. Por Dª Jph Pavon correspondiente de la Real Academia Medica de Madrid.


—Thesis read on 25 September 1794, with the object of obtaining the position of Supernumerary Academician (Natural Science Class) in the Real Academia Médica in Madrid.


—Thesis read on 23 September 1794, with the object of obtaining the position of Numerary Academician (Natural Science Class) in the Real Academia Médica in Madrid.

—This work was submitted to the opinion of the Real Academia de Medicina in Madrid in April 1795.

—The original manuscript is in the R.A.M.M. Archive (2.8.D).

F. Ruiz López, H. [ca. 1798]. [MS] [Observaciones sobre el Fucus natans].

R.A.C. Archive, file of documents donated by Joaquín González Hidalgo (unseen).
—Quoted by Barreiro (1931, p. 500).
—The thesis entitled De vera fuci natantis fructificatione. Commentarius was published in Madrid in 1798 (2.8.G).


[1]-38 pp., 1 plate.
—The manuscript of this work presumably was conserved in the R.A.C. Archive (2.8.F).

H. Pavón Jiménez, J. 1819. [MS] [Descripción de la Unanueva febrílega Ruiz & Pav.].

—This description would form part of volume 5 of the Flora Peruviana et Chilensis (Icon 505); printing of the plate was completed in 1819.

I. Ruiz López, H. [1788–1816]. [MS] [Annotaciones cerca genus Thibandiae].

R.A.C. Archive, file of documents donated by Joaquín González Hidalgo (unseen).
—Quoted by Barreiro (1931, p. 500).
—This work must have been done in the period between the arrival of the members of the Expedition in Spain (1788) and the death of Ruiz (1816).

J. Ruiz López, H. [1788–1816]. [MS] [Memoria sobre la fructificación del género Cynomorium y de sus virtudes y usos].

R.A.C. Archive, file of documents donated by Joaquín González Hidalgo (unseen).
—Quoted by Barreiro (1931, p. 500).
—This work must have been done in the period between the arrival of the members of the Expedition in Spain (1788) and the death of Ruiz (1816).


—The text and the plates of the monograph on laurels are fragments of volume 4 of the Flora Peruviana et Chilensis (Madrid, 1957) (2.6.R).
—The original manuscripts are in the R.J.B.M. Archive (2.6.G).
—This monograph, or at least its illustrations, was distributed by Pavón to other European and American botanists (Rodríguez Nozal, 1993).

3. Quinological studies and other pharmacological works

3.1. Quinological Studies

A. Ruiz López, H. 1792. Quinología, o tratado del árbol de la quina ó cascarilla, con su descripción y la de otras especies de quinos nuevamente descubiertas en el Perú; del modo de beneficiarla, de su
Elección, Comercio, Virtudes, y Extracto elaborado con Corteza recientes, y de la Eficacia de este, comprobada con observaciones; á que se añaden algunos experimentos Chímicos, y noticias acerca del Análisis de todas ellas. Madrid: Viuda é hijo de Marin.

Pp. [I–XIV], 1–103, [104–107].
—Translated into Italian (Rome, 1792) (3.1.B) and German (Göttingen, 1794) (3.1.C).
—The appendix: “Descripción del Arbol conocido en el Reino del Perú con el nombre de Quino-quina...” (pp. 97–103), translated into English (London, 1821) (3.1.D).
—There is a facsimile collection (Burgos, 1994) with introductory studies by M. L. Andrés Turrión and E. Alegre Pérez. A single volume together with the Suplemento a la Quinología (Madrid, 1801) (3.1.G).
—Unfortunately we have been unable to locate the manuscript of this work.


Pp. [I]–XXXII, 1–139.


Pp. [I–VIII], [1]–106.


—Translation of the appendix (pp. 97–103) which accompanies the Quinología (Madrid, 1792) (3.1.A).

E. Ruiz López, H. [post 1792]. Cualidades q’ ha de tener la buena quina de cualquier especie q’ sea. Quinología Ruiz.
—We have dated this manuscript after 1792, the year of publication of the Quinologia by Ruiz, in which there is a reference to this short work.


G. Ruiz López, H. and J. Pavón Jiménez. 1801. Suplemento á la Quinología, en el qual se aumentan las Especies de Quina nuevamente descubiertas en el Perú por Don Juan Tafalla, y la Quina naranjada de Santa Fé con su estampa. Añádese la Respuesta á la Memoria de las Quinas de Santa Fé, que insertó Don Francisco Zea en los Anales de Historia natural, y la satisfacción á los reparos ó dudas del Ciudadano Jussieu sobre los Géneros del Próximo de la Flora del Perú y Chile. Madrid: Viuda e hijo de Marín.

Pp. [I], [I–VIII], 1–151, 1 plate.
—The epistle . . . ad clar. vir. A.L. Jussieum, botan. professorem parisiensem . . . (pp. 121–154) was reprinted in volume 3 of Flora Peruviana et Chilensis, pp. 9–24 (Madrid, 1802) (2.6.R). Stafleu & Cowan (1983) include an independent edition (Matriti: [Typographia Mariana], 1801), which we have been unable to confirm.
—There is a facsimile collection (Burgos, 1994) with introductory studies by M. L. Andrés Turrión and E. Alegre Pérez. A single volume together with the Quinologia (Madrid, 1792) (3.1.A).
—Unfortunately we have been unable to locate this manuscript.

H. Ruiz López, H. 1808. [MS] Compendio historico-medico comercial de las Quinas y de sus Extractos y del de Ratanhia. Diagnosticos o caracteres para conocer y distinguir las especies de Quina y Extractos. Abusos q.e. hay en el Comercio de ambos generos. Medios de corregirlos. Instrucciones para hacer los cortes de las Quinas y la extracción, desecación, encajonamiento, transporte y conservacion de sus cortezas.

B.M. (N.H.), MSS Rui.
44 pp. [1–44]; bound manuscript accompanied by other works by Ruiz (3.1.I–3.1.R), folio.
—There are another two copies in existence, presumably earlier than this, included in the same file (MSS Rui), pages 45–81 (3.1.I) and 83–111 (3.1.J), respectively.
—The quinological materials sent by the assistants on the Expedition to Peru arrived in Spain in 1806, and in December 1808 Ruiz presented this thesis before the Real Academia de Medicina in Madrid.

I. Ruiz López, H. 1808. [MS] Compendio historico-medico comercial de las Quinas y de sus Extractos y del de Ratanhia. Diagnosticos o caracteres para conocer y distinguir las especies de Quina y Extractos. Abusos q.e. hay en el Comercio de ambos generos. Medios de corregirlos. Instrucciones para hacer los cortes de las Quinas y la extracción, desecación, encajonamiento, transporte y conservacion de sus cortezas.

B.M. (N.H.), MSS Rui.
37 pp. [45–81]; bound manuscript accompanied by other works by Ruiz (3.1.H–3.1.R), folio.
—There are another two copies in existence, included in the same file (MSS Rui), pages 1–44 (3.1.H) and 83–111 (3.1.J), respectively.
—The quinological materials sent by the assistants on the Expedition to Peru arrived in Spain in 1806, and in December 1808 Ruiz presented this thesis before the Real Academia de Medicina in Madrid.

J. Ruiz López, H. 1808. [MS] Compendio historico-medico comercial de las Quinas y de
sus Extractos y del de Ratanhia. Diagnosticos o caracteres para conocer y distinguir las especies de Quina y Extractos. Abusos q. hay en el Comercio de ambos generos. Medios de corregirlos. Instrucciones para hacer los cortes de las Quinas y la extracción, desecación, encajonamiento, transporte y conservacion de sus cortezas.

B.M. (N.H.), MSS Rui.
29 pp. [83-111]; bound manuscript accompanied by other works by Ruiz (3.1.H–3.1.R), folio.
—There are another two copies in existence, included in the same file (MSS Rui), pages 1–44 (3.1.H) and 45–81 (3.1.I), respectively.
—The quinological materials sent by the assistants on the Expedition to Peru arrived in Spain in 1806, and in December 1808 Ruiz presented this thesis before the Real Academia de Medicina in Madrid.

B.M. (N.H.), MSS Rui.
2 pp. [148–149]; bound manuscript accompanied by other works by Ruiz (3.1.H–3.1.R), folio.

B.M. (N.H.), MSS Rui.
1 p. [150]; bound manuscript accompanied by other works by Ruiz (3.1.H–3.1.R), folio.

M. Ruiz López, H. [1808]. [MS] Reparos y reflexiones críticas sobre la memoria de la Quina francesa, leida a la Junta de Profesores de la Escuela especial de Paris por Mr. Leroy en 20 de Marzo de 1808.

B.M. (N.H.), MSS Rui.
8 pp. [122–129]; bound manuscript accompanied by other works by Ruiz (3.1.H–3.1.R), folio.
—This work was probably written at the end of 1808, in response to the thesis of Mr. Leroy, presented 20 March 1808.

N. Ruiz López, H. 1811. [MS] Experimentos Químicos sobre las Quinas hechos en Madrid año de 1811 por el Sr. Vidot y tratados con Ruiz.
B.M. (N.H.), MSS Rui.
4 pp. [131–134]; bound manuscript accompanied by other works by Ruiz (3.1.H–3.1.R), folio.

B.M. (N.H.), MSS Rui.
1 p. [135]; bound manuscript accompanied by other works by Ruiz (3.1.H–3.1.R), folio.
—This work must have been done in the period between the arrival of the Expedition members in Spain (1788) and the death of Ruiz (1816).
—The handwriting does not resemble that of Ruiz, although Estrella (1992, p. 47) attributes this work to him.

B.M. (N.H.), MSS Rui.
1 p. [136]; bound manuscript accompanied by other works by Ruiz (3.1.H–3.1.R), folio.
—This work must have been done in the period between the arrival of the mem-
bers of the Expedition in Spain (1788) and the death of Ruiz (1816).

B.M. (N.H.), MSS Rui.
1 pp. [137–138]; bound manuscript accompanied by other works by Ruiz (3.1.H–3.1.R), folio.
—This work must have been done in the period between the arrival of the Expedition members in Spain (1788) and the death of Ruiz (1816).

R. Ruiz López, H. [1788–1816]. [MS] Razon de las siete especies de Quina ó Cascarillas qe. se hallan en las Montaña de los Panatahuas Provincia vezina à la de Huanuco.
B.M. (N.H.), MSS Rui.
5 pp. [142–146]; bound manuscript accompanied by other works by Ruiz (3.1.H–3.1.Q), folio.
—This work must have been done in the period between the arrival of the Expedition members in Spain (1788) and the death of Ruiz (1816).

B.M. (N.H.), MSS Rui (unseen).
—Quoted by Barreiro (1931, p. 501).

Pp. [1]–182.
—Includes an “Introducción,” written by Estrella (pp. 15–51); the “Compendio historico-médico comercial de las quinas,” written by Ruiz (pp. 55–127) (3.1.H); and a series of “Trabajos quinológicos menores,” also attributed to Ruiz (pp. 131–182) (3.1.K–3.1.R).
—The original manuscripts are in the B.M. (N.H.).

U. Pavón Jiménez, J. [1816–1826. [MS] Nueva Quinología ó sea Una monografía de 41 especies de Quinas ó Cascarillas cuyo género es en Botánico Chinchona, cuyas especies diferentes, las once están ya publicadas en la Flora peruana y chilense y las 30 inéditas descubiertas en el Perú y varias prov. de Quito por Dn. Hipolito, D. Jose Pavon y el discipulo de botánica Dn. Juan Tafalla, y últimamente corregidas y aumentadas con nuevas observaciones interesantes por Dn. José Pavon Director de la Flora Año de 1826.
B.M. (N.H.) (unseen).
—Quoted by Barreiro (1931, p. 502). There is a copy of this manuscript in the R.J.B.M. Archive (3.1.V).
—We agree with Estrella (1987) in indicating that the probable date of the beginning of this work was the year of the death of Ruiz (1816).
—This manuscript was used by Howard (1862).

V. Pavón Jiménez, J. [1816–1826. [MS] Nueva Quinología ó sea Una monografía de 41 especies de Quinas ó Cascarillas cuyo género es en Botánico Chinchona, cuyas especies diferentes, las once están ya publicadas en la Flora peruana y chilense y las 30 inéditas descubiertas en el Perú y varias prov. de Quito por Dn. Hipolito, D. Jose Pavon y el discipulo de botánica Dn. Juan Tafalla, y últimamente corregidas y aumentadas con nuevas observaciones interesantes por Dn. José Pavon Director de la Flora Año de 1826.
R.J.B.M. Archive, division IV, file 15,1.
Pp. [I], 1–130; folio.
—We agree with Estrella (1987) in indi-
cating that the probable date of the beginning of this work was the year of the death of Ruiz (1816).
—The prologue to this copy was published by Estrella (1987) (3.1.W).

—The original manuscript is in the R.J.B.M. Archive (3.1.V).

3.2. Other works of a pharmacological nature

A. Ruiz López, H. [1794]. [MS] Acerca de las Calagualas que nos vienen de la America meridional, del origen de su uso; de la etimologia de sus nombres, de las Provincias y sitios en que se producen; del metodo de recogerlas y desecarlas; de la conservacion y transporte; de sus usos y virtudes; y sus descripciones.
—This was one of the Theses read by its author in October 1794, with the object of obtaining the position of Supernumerary Academician (Pharmacy Class) in the Real Academia Médica de Madrid.

—This corresponds to pp. 19–44 in the book Disertaciones sobre la raíz de la Ratánhia, de la Calaguala y de la China, y acerca de la yerba llamada Canchalagua (Madrid, 1796) (3.2.1).
—The original manuscript is in the R.A.M.M. Archive (3.2.A).

C. Ruiz López, H. [1794]. [MS] Disertacion I. Sobre la Raiz de china de su primero y ulteriores descubrimientos de la propagacion de su uso, de sus virtudes, de la recoleccion y medios de beneficiarla, de su comercio y descripcion de su Planta.
—This was one of the Theses read by its author in October 1794, with the object of obtaining the position of Supernumerary Academician (Pharmacy Class) in the Real Academia Médica de Madrid.

D. Ruiz López, H. [1788–1816]. [MS] Relación y noticias que da el botánico D. Hipólito Ruiz al Dr. D. Hipólito [Unanue] para que por ellas puedan enviar desde el Perú a aquel naturalista algunos zurrones de raíces de
“China peruana”, a fin de que dicho botánico continúe las observaciones sobre la virtud y usos de esta nueva droga sumamente interesante al comercio español y de las más preciosas para el alivio del hombre en sus dolencias.

R.A.C. Archive, file of documents donated by Joaquín González Hidalgo (unseen).
—Quoted by Barreiro (1931, p. 500).
—This work must have been done in the period between the arrival of the Expedition members in Spain (1788) and the death of Ruiz (1816).


—This corresponds to pp. 57–72 of the book Disertaciones sobre la raiz de la Ratánhia, de la Calaguala y de la China, y acerca de la yerba llamada Canchalaguna (Madrid, 1796) (3.2.1).
—The original manuscript is in the R.A.M.M. Archive (3.2.C).


—This corresponds to pp. 45–56 of the book Disertaciones sobre la raiz de la Ratánhia, de la Calaguala y de la China, y acerca de la yerba llamada Canchalaguna (Madrid, 1796) (3.2.1).
—Unfortunately the manuscript of this work is not in the R.A.M.M. Archive.

G. Ruiz López, H. [1794]. [MS] Disertacion Acerca de la Ratanhia; de las Provincias y terrenos en que se cria; de los nombres que la dan en estos Países; del descubrimiento hecho por los Botanicos de la Expedicion del Perú; del uso que hacen de sus raices en dicho Reyno; del metodo de recogerlas desecarlas y encaxonarlas; de la elaboracion de su extracto; del uso, virtudes y aplicaciones de éste y de las mismas raices; de las qualidades y de algunos principios que en ellas he encontrado; de varias recetas compuestas con el Extracto, y descripcion de la Planta.

R.A.M.M. Archive, file [5c], document 22b. Ff. [1–19]; quarto.
—Thesis read by its author in November 1794, with the object of obtaining the position of Supernumerary Academician (Pharmacy Class) in the Real Academia Médica of Madrid.


—This corresponds to pp. 1–18 of the book Disertaciones sobre la raiz de la Ratánhia, de la Calaguala y de la China, y acerca de la yerba llamada Canchalaguna (Madrid, 1796) (3.2.I).
—The original manuscript is in the R.A.M.M. Archive (3.2.G).


—These four these were also published in Mem. Real Acad. Méd. Madrid 1: 349–420, 1797 (3.2.B, 3.2.E, 3.2.F, 3.2.H).
—There is a facsimile collection (Burgos, 1992) with introductory studies by A. González Bueno and R. Rodríguez Nozal.


—This work was submitted to the Real Academia de Medicina in Madrid between April and May 1795 for review.
—Published with the title Disertacion sobre
la raíz de la Ratánhia (Madrid, 1799) (3.2.K).
—This is a corrected version of the thesis published in 1796 (3.2.I) and in 1797 (3.2.H).

K. Ruiz López, H. 1799. Disertacion sobre la raiz de la Ratánhia, especifico singular contra los fluxos de sangre, que se insertó en el primer tomo de las Memorias de la Real Academia Médica de Madrid, y se ilustra nuevamente con Notas y con la Estampa de la planta. Madrid: Viuda é Hijo de Marin.

Pp. [I–XIV], 1–47, 1 plate.
—The original manuscript is in the R.A.M.M. Archive (3.2.J).


—This work was submitted to the Real Academia de Medicina in Madrid between April and May 1795 for review.
—Published with the title Memoria sobre la legítima Calaguala (Madrid, 1805) (3.2.N).
—This is a corrected version of the thesis
N. Ruiz López, H. 1805. Memoria sobre la legítima Calaguala y otras raices que con el mismo nombre nos vienen de la América meridional. Madrid: José del Collado. Pp. [I–IV], [1]–60; 1 plate.
—Translated into English (London, 1821) (3.2.O).
—The original manuscript is in the R.A.M.M. Archive (3.2.M).

—Translation of the text printed in Madrid (1805) (3.2.N).

—This work was submitted to the Real Academia de Medicina in Madrid between April and May 1795 for review.
—This is a corrected version of the thesis published in 1796 (3.2.I) and in 1797 (3.2.E).

—Read in the Real Academia de Medicina in Madrid, in March 1817, after the death of Ruiz (1816), by his son, Antonio Ruiz Gómez and published in 1821 in a corrected and expanded edition which includes an “Elogio histórico,” written by Ruiz Gómez (3.2.R).

—There is an English translation of the biographical study of Ruiz Gómez in the introduction (pp. 7–37) to: Ruiz Gómez, A. 1831. An historical Elogium on Don Hipólito Ruiz, first botanist and chief of the expedition to Perú and Chile, transl. H. Hatcher. Salisbury: W.B. Brodie & Co.
—The original manuscript is in the R.A.M.M. Archive (3.2.Q).

—This work was submitted to the Real Academia de Medicina in Madrid in December 1803 for review.
—Published in 1805 (3.2.U).

—Quoted by Barreiro (1931, p. 499).
—The thesis on “yallhoy” was presented before the Real Academia de Medicina in Madrid in December 1803 (3.2.S).

—Translated into English (London, 1821) (3.2.V).
—The original manuscript is in the R.A.M.M. Archive (3.2.S).

—Translation of the text printed in Madrid (1805) (3.2.U).


R.A.C. Archive, file of documents donated by Joaquín González Hidalgo (unseen).

—Quoted by Barreiro (1931, p. 499).


—Translated into English (London, 1821) (3.2.Y).

—The manuscript of this work was presumably conserved in the R.A.C. Archive (3.2.W) but now cannot be located.


—Translation of the text printed in Madrid (1805) (3.2.X).

Z. Ruiz López, H. 1792. [MS] [Sobre el tártaro vitriolado].

R.A.F.M. Archive (unseen).


4. The dispute with A. J. Cavanilles


—Although Ruiz attributed this article to himself, as well as the article which followed it (4.B) (cf. 4.C), the arguments put forward by Cavanilles (cf. Cavanilles, 1796) are enough to justify at least the co-authorship of Gómez Ortega.

—Reprinted in Cavanilles (1796, pp. 16–18).


—Cf. the reasoning in 4.A.

—Reprinted in Cavanilles (1796, pp. 31–95).

C. Ruiz López, H. 1796. Respuesta para desengaño del público á la impugnacion que ha divulgado prematuramente el Presbítero don Josef Antonio Cavanilles, contra el Próximo de la Flora del Perú, e insinuacion de algunos de los reparos que ofrecen sus Obras Botánicas. Madrid: Viuda del Hijo de Marín.

Pp. [1]–100.


—Unfortunately we have been unable to locate the manuscript of this work.

D. Ruiz López, H. [1796–1800]. [MS] Anidadversiones o reparos que deben tener pre-
senten los Botanicos para quando lean las obras de Dn. Jose Antonio Cavanilles.

R.J.B.M. Archive, division IV, file 9,1,4.
Pp. [1–60]; folio.
—It is highly probable that this manuscript was written in the period between the publication of the Respuesta para desengaño (4.C) and the edition of the first book of volume 6 of the Icones by Cavanilles (Madrid, 1800), one of the targets of Ruiz’s criticisms in these “Animadversiones.”
—A study of this manuscript is in Rodrigo Nozal (1992).


R.A.C. Archive, file of documents donated by Joaquín González Hidalgo (unseen).
—Quoted by Barreiro (1931, p. 500).
—This must doubtless have been written between 1788 and 1804, when the Ruiz-Cavanilles dispute took place.

F. Ruiz López, H. [ca. 1794]. [MS] Sobre la existencia o no de los géneros naturales.

R.A.C. Archive, file of documents donated by Joaquín González Hidalgo (unseen).
—Quoted by Barreiro (1931, p. 500).
—The debate about the existence of natural genera took place in 1794, in the meetings of the Real Academia de Medicina in Madrid.


R.A.C. Archive, file of documents donated by Joaquín González Hidalgo (unseen).
—Quoted by Barreiro (1931, p. 500).
—This must doubtless have been written between 1788 and 1804, when the Ruiz-Cavanilles dispute took place.

5. Botanical texts


This probably formed part of the legacy of Ruiz to his descendants who, in 1821, must still have had possession of it (unseen).
—Quoted by Ruiz Gómez (1821, p. 33), Pascual de Miguel (1867, p. 15) and Barreiro (1931, p. 501).
—This work must have been written between the arrival of the Expedition members in Spain (1788) and the death of Ruiz (1816).

This probably formed part of the legacy of Ruiz to his descendants who, in 1821, must still have had possession of it (unseen).

—Quoted by Ruiz Gómez (1821, p. 32), Pascual de Miguel (1867, p. 15) and Barreiro (1931, p. 501).

—This work must have been written between the arrival of the Expedition members in Spain (1788) and the death of Ruiz (1816).


R.A.C. Archive, file of documents donated by Joaquín González Hidalgo (unseen).

—Quoted by Barreiro (1931, p. 499).

—This work must have been written between the arrival of the Expedition members in Spain (1788) and the death of Ruiz (1816).

D. Ruiz López, H. [1788–1816]. [MS] Instrucciones a que deberán arreglarse los botánicos de Mejico.

R.A.C. Archive, file of documents donated by Joaquín González Hidalgo (unseen).

—Quoted by Barreiro (1931, p. 499).

—This work must have been written between the arrival of the Expedition members in Spain (1788) and the death of Ruiz (1816).

6. Various works: Texts of anthropological, ethnographical and historical interest


This probably formed part of the legacy of Ruiz to his descendants who, in 1821, must still have had possession of it (unseen).

—Quoted by Ruiz Gómez (1821, p. 32), Pascual de Miguel (1867, p. 15) and Barreiro (1931, p. 501).

—This work must have been written between the arrival of the Expedition members in Spain (1788) and the death of Ruiz (1816).


This probably formed part of the legacy of Ruiz to his descendants who, in 1821, must still have had possession of it (unseen).

—Quoted by Ruiz Gómez (1821, p. 33), Pascual de Miguel (1867, p. 15) and Barreiro (1931, p. 501).

—This work must have been written between the arrival of the Expedition members in Spain (1788) and the death of Ruiz (1816).

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Cátedra de Historia de la Farmacia y Legislación Farmacéutica
Facultad de Farmacia
Pza. de Ramón y Cajal, s/n
Universidad Complutense de Madrid
28040-Madrid, España [AGB, RRN]