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Honoring Philip Barker Webb: the three intriguing stories of *Webbia* as a genus name

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Abstract. The name Webbia has been used to describe three different genera: Webbia Spach (Clusiaceae), Webbia DC., nom. illeg. (Asteraceae: Vernonieae), and Webbia Sch. Bip., nom. illeg. (Asteraceae: Astereae). The title of the botanical journal Webbia does not pertain to any of these generic names but is a mere Latinization of the surname Webb, and was created as a patronym that honors the legacy of Philip Barker Webb (1793–1854). The journal is a tribute to Webb's botanical contributions, and his importance in the development of the collections of the Museo di Storia Naturale di Firenze in the establishment of the Herbarium Webbianum. The journal had an uneasy start, as a book proposal made by the Italian professor (Università di Pisa) Ugolino Martelli to the Società Botanica Italiana to honor Webb was rejected in 1905. The names Conyza obscura DC. and Erigeron capensis Houtt. are lectotypified. The nomenclature of Conyza pinifolia Lam. is revisited, and it is considered a legitimate name. A specimen housed in G-DC is designated as the neotype of this Lamarckian name.

Keywords: Africa, botanical history, Florence, herbaria, Macaronesia, South Africa, tropical floras.

INTRODUCTION

Founded in 1905 as a book by Italian professor (University of Pisa) Ugolino Martelli¹ (1860–1934, Figure 1A), the journal *Webbia* (Figure 1B)

¹ An extensive biographical account of Martelli was written by Negri (1935).



Figure 1. Images relevant to the early stages of the journal *Webbia*. (A) Ugolino Martelli, founder of the journal [from Negri (1935)]. (B) Cover of the first issue of the journal, then published as a book. Courtesy of *Biblioteca di Scienze – Botanica, Università degli Studi di Fire-nze*.

honors Philip Barker Webb (1793–1854, Figure 2A) for his botanical legacy and his contributions in the development of the collections of the *Museo di Storia Naturale di Firenze*. Indeed, Webb's herbarium, documents, library, and house in Paris were bequeathed in his will to the Grand Duke of Tuscany Leopold II of Lorraine (1797–1870). The earnings from the sale of the house created an endowment for the curation of Webb's collections and archives (Parlatore 1856; Stearn 1937).

The plant specimens formed the *Herbarium Webbianum* (Figure 3), which is currently a central part of the FI herbarium of the Botanical section "F. Parlatore" of the Natural History Museum of the University of Florence. Its entire library and archives are kept in the Biblioteca di Scienze – Botanical library at University of Florence. Many of Webb's documents are posted online as part of the Humboldt Project (https://www.sba.unifi. it/p1790.html), which was sponsored by the Max-Planck-Institut für Wissenschaftgeschichte (Germany) and the Fundación Canaria Orotava de Historia de la Ciencia (Tenerife, Canary Islands, Spain). Details concerning the content and scope of Webb's materials held in the Herbarium Webbianum were reviewed by Parlatore (1874), Steinberg (1973, 1977), Moggi (1993), and Nepi (2009).

Extensive accounts of Webb's life and achievements were published by many authors, including Hooker (1854), Gay (1856), Parlatore (1856, 1992), Martelli (1904), Chiarugi (1956), and Stearn (1973), and it is



Figure 2. Portraits of relevant botanists involved in the use of the name *Webbia* to describe three different plant genera. (A) Philip Barker Webb holding a branch of *Webbia canariensis* (L.) Webb & Berthel. [accepted name *Hypericum canariense* L.] (Clusiaceae). (B) Édouard Spach. (C) Augustin Pyramus De Candolle. (D) Karl Schultz Bipontinus. Portrait sources: *Histoire Naturelle des Îles Canaries* (Tome 3, Part 2, *Phytographia Canariensis* Section 1: Frontispiece, 1836), courtesy of Carlos Gaviño de Franchy (A); Roberto Miranda, December 2021, portrait based on that published by Wittrock (1905: Tfl. 142) (B); print made by Pierre-Elie Bovet after Amélie Munier-Romilly, ca. 1825, British Library [https://www.britishmuseum.org/ collection/object/P_1954-1103-383] (C); and unknown source, courtesy of the Hunt Institute for Botanical Documentation (D).



Figure 3. View of the Herbarium Webbianum (FI-Webb). Courtesy of Sezione Botanica "F. Parlatore" of the Museo di Storia Naturale dell'Università degli Studi di Firenze®.

not the main scope of our contribution to provide a full review of his biography. Nevertheless, because of Webb's connections with Italy, especially with Florence, in the introduction of our paper we provide a historical overview pertinent to Webb's associations with this country, and especially with Tuscany.

Webb's contributions to the Macaronesian island flora are also relevant to our study. A few works, published mostly by Canarian Island scholars, provide details of Webb's significant legacy to Macaronesian botany (Stearn 1937, 1973; García Pérez 1988; Rodríguez Delgado 1998; Relancio and Breen 2006; Suárez Martín 2016, 2018; Rico et al. 2017). Between 1828 and 1830, Webb and the French naturalist Sabin Berthelot (1794-1880) extensively explored this archipelago, visiting all of its islands with the exception of La Gomera and El Hierro. This exploration resulted in the single most important account ever produced on the natural history of the Canaries, the Histoire Naturelle des Îles Canaries, a multivolume work, authored mainly by these two naturalists, that was published between 1835 and 1850. Webb's work pertinent to the islands was followed by his seminal publication on the flora of Cabo Verde (Webb 1849). The latter was a floristic treatment for which Webb was invited by the then Kew Garden director Sir William J. Hooker (1785-1865). Interestingly, Webb wrote this treatment without ever visiting Cabo Verde (Rico et al. 2017).

PHILIP BARKER WEBB AND ITALY

At the age of six, Webb, who was born into a wealthy aristocratic family, lost his father, and a large fortune inherited by his mother allowed Webb to receive financial support to travel extensively and to cultivate his passion for classical history, languages, and the natural world. Besides his native tongue English, Webb was fluent in Latin and Greek, as well as in modern Spanish, Italian, and French. Furthermore, he received excellent training in natural history as a student at Christ Church College, Oxford.

In 1815, Webb made his first trip to Italy where he met Alberto Parolini (1788–1867), an Italian humanist and botanist from Bassano del Grappa, Veneto (Figure 4A). This interaction led to a solid friendship that enhanced Webb's fascination for Italy. Subsequently, both undertook an extensive and long joint trip to the Eastern Mediterranean, centered in Greece and Turkey. The voyage started in Naples on 30th April 1819 and finished in the same city on 21st June 1820. The main focus of this journey was to study the natural history of this region and to visit one of the main cradles of the



Figure 4. Images pertinent to Alberto Parolini and Philip B. Webb. (A) Portrait of A. Parolini from Matteo Favaretti collection. (B) Illustration of *Parolinia ornata* Webb (Brassicaceae) as published by Webb (1840: Plate 3), this is the type species of the Canary Island endemic genus *Parolinia* (La Serna Ramos and León Arencibia 1980: 116), dedicated to Parolini by Webb. (C) Image of *P. ornata* in habitat. Photo credit: Gerardo García Casanova (C); courtesy of *Phaidra, Sistema Bibliotecario di Ateneo, Università degli Studi di Padova* (A); and *Biblioteca di Scienze – Botanica, Università degli Studi di Firenze*[®] (B).

Western civilizations. Later, Webb (1840) described the Canarian endemic genus Parolinia [seven species and occurring in the islands of La Gomera, Gran Canaria, La Palma, and Tenerife (Santos-Guerra 2021), Figures 4B-C] honoring Parolini's botanical contributions, and recognizing the great friendship that they cultivated ("Je dédie ce genre singulier à M. Parolini, éleve et compagnon de Brocchi, qui cultive lui-même les sciences naturelles avec succés. Il possède um des jardins de botanique les plus remarquables de l'Italie, et la collection la plus riche des roches de cette péninsule, qu'il livre généreusement aux études des savans étrangers. C'est avec lui que j'ai parcouru l'Italie méridionale, la Grèce, l'Asie-Mineure, et les îles de Malte et de Sicile, et je suis heureux de lui donner ici cette faible marque de ma haute estime et de ma vieille amité."²

Between 1820 and 1821, Webb spent some additional time in Italy visiting the island of Ischia (Naples), Rome, Florence, Milan, and Venice, but his most relevant subsequent expedition was the aforementioned one to the Canary Islands (year 1828–1830). Following his stay in the Canaries, he and Berthelot travelled to France, northern Italy, and Switzerland. After this trip, Webb and Berthelot settled in Paris (between 1833 and 1847), mostly preparing their *Histoire Naturelle des Îles Canaries*. During this period, Webb hardly made any additional voyages outside England and France. It was in 1848 that Webb visited Italy again, and between this year and 1850 he devoted a great deal of his time botanizing in this country.

In Rome, Webb met the aristocrat Contessa Elisabetta Fiorini-Mazzanti (1799–1879) who was an authority on cryptogams. In Florence, Webb was impressed with the botanic garden. Founded in 1545 by the Grand Duke of Tuscany, Cosimo dei Medici (1519–1574), it is one of the oldest botanic institutions of the world. This botanic garden accommodated the *Imperiale e Regio Museo di Fisica e Storia Naturale*, where the *Herbarium Centrale Italicum* (known also as *Erbario Centrale Italiano* and currently as Botanical Section "Filippo Parlatore" of the Natural History Museum of the University of Florence) was located. This herbarium, created by the Grand Duke of Tuscany Leopold II of Lorraine (1797–1870) in 1842, had the Sicilian botanist Filippo Parlatore (1816–1877) as its first director (Figure 5). By then, Parlatore was considered the most talented botanist of the country, and he and Webb developed a great rapport; indeed, Webb's (1854) last publication was prefaced by Parlatore, in which he referred to Webb as "*doctissime amice*" ["most erudite friend"]. Furthermore, Parlatore wrote the treatments of Apiaceae and Poaceae for the *Histoire Naturelle des Îles Canaries* (Parlatore 1842–1843, 1848).

This visit of Webb to Italy took place at the same time that Florence became the main hub for botanical studies of the country. Here, he found in Parlatore a great colleague, and greatly valued the vision of Leopold II as a statesman in supporting botanical endeavors by creating a major herbarium that was part of a natural history museum specifically located in a botanic garden. There is no doubt that the pro-botanical environment that he encountered then in Florence was relevant for Webb to bequeath his documents, collections, library, and Paris house to Leopold II. Webb being a highly cultured person with a well-rounded education and a passion for history, classical cultures, and art also found in Florence a greatly stimulating place. This ancient Italian city provided him with synergistic inspirations from the fields of both humanities and natural history. It is not surprising, therefore, that he elected to leave many of his belongings to the main city of Tuscany.

Webb made his last trip to Italy, including Florence, between late 1852 and July 1853, this happened one year prior to his death in Paris on 31st August 1854. After this journey to Italy, he returned to Paris and only made occasional visits to England (Relancio and Breen 2006: 68).



Figure 5. Images pertinent to Filippo Parlatore. (A) Portrait of F. Parlatore. (B) Bust of F Parlatore. Courtesy of *Sezione Botanica* "F. Parlatore" of the *Museo di Storia Naturale dell'Università degli Studi di Firenze*[®].

² I dedicate this singular genus to M. Parolini, student and mate of Brocchi [it refers to Giovanni Battista Brocchi (1772–1826) who was also born in Bassano del Grappa], who cultivates the natural sciences with success. It has one of the most remarkable botanical gardens in Italy, and the richest collection of rocks from this peninsula, which he generously makes available to the studies of foreign scholars. It was with him that I traveled through southern Italy, Greece, Asia Minor, and the islands of Malta and Sicily, and I am happy to give him here this humble recognition for my high respect and appreciation, and my longstanding friendship.

On 1st December 1855, about a year after the death of Webb, Filippo Parlatore honored the memory of his friend with a lecture delivered at the *Imperiale e Regio Museo di Fisica e Storia Naturale* of Florence in the presence of countless political, diplomatic, cultural and scientific authorities, including a large audience of influential people from Tuscany (Parlatore 1856, 1992 [posthumous]).

Parlatore's lecture, published by him on 24th March 1856, accompanied by Webb's complete bibliography, included a detailed description of Webb's collections and the herbaria represented therein, and also a detailed synopsis of all the botanical collections of the *Herbarium Centrale Italicum*, by then regarded among the top ten most important botanical institutions worldwide (Simpson 2010, Funk 2017, Thiers 2022).

As a testimony of Webb's relationships with important botanists and scientists of the time, Parlatore (1856) also published a selection of correspondence between Webb and natural history scholars such as A. Brogniart, J. Pavón, C. Heineken, A.P. De Candolle, J. D'Urville, M. Lagasca, F.E.L. Fischer, Ch. Guadichaud, F. de Girard, A. de Saint-Hilaire, Ad. de Jussieu, and A. Richard.

WEBBIA: FROM BOOK TO JOURNAL

Prof. Martelli proposed to the *Società Botanica Italiana* to publish a festschrift under the name of *Webbia* to celebrate Webb's 50th memorial anniversary (Martelli 1904, 1905a; Moggi 2006). The original title of the book was a mere commemorative Latin form of the surname Webb to create a patronym (cf., *Arnoldia, Englera, Linnaea, Willdenowia*, etc. as journal names honoring distinguished botanists). Therefore, it is evident that *Webbia*, as a journal title, does not refer to any generic name.

The intention was to title the publication as a tribute to Webb and to enshrine him as a distinguished botanist and as one of the most important foreign contributors who helped to advance botany as a discipline in Italy. It was a recognition of Webb's associations with Italian botanists and to him for bequeathing his collections, library, documents, and house in Paris to the city of Florence.

During that era, it was not an unusual practice to also Latinize names of personalities as patronym to create the titles of new Italian journals (e.g., *Delpinoa* dedicated to Federico Delpino, *Malpighia* as tribute Marcello Malpighi or *Parlatorea* to honor Filippo Parlatore; see list of Italian journal in Lenzi Grillini (1988).

However, the initial efforts for founding *Webbia* met with hurdles. Three major obstacles were encountered

by Martelli (1904) when he presented his proposal to the Società Botanica Italiana. The first obstacle was by those who felt that such a celebratory initiative should be part of a centennial and not of a fiftieth anniversary event to honor Webb's legacy with the title of a major publication. Stephen Sommier (1848-1922), President of this botanical society at that time, was one of those opponents. Another objection, laid by Pasquale Baccarini (1858-1919), Director of the Istituto Botanico e dell'Erbario Centrale di Firenze at that time, was that adequate scientific contributions were not available to justify a publication. The third obstacle was that by then not all of Webb's collections had been transferred from the Imperiale e Regio Museo di Fisica e Storia Naturale to the Istituto Botanico e dell'Erbario Centrale di Firenze; the latter is at Piazza San Marco, and this is the site at which Webb's collections are currently located. Pasquale Baccarini was also the main proponent of this objection.

Prof. Martelli was obviously frustrated that these objections resulted in the rejection of his proposal, mentioning the same in the foreword to what can be considered as the first issue of Webbia (Martelli 1905b): "My proposal to the Italian Botanical Society, based in Florence, was modest and did not want to offend anyone's susceptibility. It was a proposal that a priori I hoped to be accepted with complacency even by those who were hostile to it. It failed, due to the veiled submissiveness of the Presidency of the Botanical Society and the hostility of the Director of the Florentine Botanical Institute, who with smooth words opposed the honors." Undeterred by the lack of support from the Società Botanica Italiana, Martelli eventually published this book himself (Lenzi Grillini 1988: 1078-1079). This work as published in 1905 represents the beginning of a long academic journey eventually establishing Webbia as a botanical journal (for more details on the first 100 years of the journal, see Moggi 2006). It is beyond any doubt that the founding of the journal Webbia was certainly not under quiet and peaceful circumstances, but considering that it is about to reach 120 years of life, it was worth it.

WEBBIA: THE THREE GENERA

The name Webbia was used to describe three different genera honoring Webb's legacy. The earliest of these genera belongs to the Guttiferae (or Clusiaceae) and was published in June 1836 by the French botanist Édouard Spach (1801–1879), (Spach 1836a: 408, "Nous avons dédié ce genre à M. Ph. Barker-Webb, célèbre botaniste anglais, auter (conjointement avec M. Sabin

Berthelot) un magnifique ouvrage sur l'histoire naturelle des iles Canaries"3). As circumscribed by Spach (1836a: 408-410, 1836b: 356) the genus included four Macaronesian endemics (i.e., W. canariensis (L.) Webb & Berthel., W. floribunda (Aiton) Spach, W. heterophylla Spach., and W. platysepala Spach) that were previously accommodated in the large and widespread genus Hypericum L. Currently, Webbia Spach, however, is recognized as Hypericum sect. Webbia (Spach) R.Keller (Robson 1996), a monospecific taxon that encompasses the Canary Island-Madeiran endemic H. canariense L. (Figures 6A and 7). Interestingly, Webb & Berthelot (1836) recognized the genus Webbia with three species (W. floribunda, W. canariensis, and W. platysepala). Among the specimens that we examined we found only one that has Webb's handwriting (P05151163, housed in P) that he identified as belonging to Webbia (as W. canariensis, collected in Aguamansa, Orotava, Tenerife). We also looked for references to Webbia in the available correspondence between Webb and Spach. There is a single letter that they exchanged (dated March 29, 1849, document #337.1.1); however, this letter does not contain any mention of this genus.

Perhaps unaware of Webbia Spach (June 1836), in October 1836, Augustin Pyramus De Candolle (1778-1841) described Webbia DC. (Asteraceae: Vernonieae, "Dixi in honorem cl. bot. angl. P.B. Webb, Orientis, Africae borealis et insularum Canariensium strenuo observatori"⁴) to include an assemblage of eight species (De Candolle 1836: 72) mostly confined to South Africa (Figures 6D-F, and 8). Because of the illegitimacy of the name Webbia DC. and its taxonomic reassessment, these eight species have been transferred to two different genera. Seven of these species are currently included in the African genus Hilliardella H.Rob. (Swelankomo et al. 2016) but the eighth species (W. serratuloides DC.) was transferred to the African genus Polydora Fenzl ex H.Rob (Robinson 1999: 233), which is now recognized to be illegitimate (IPNI 2022; Manning and Govaerts, in prep.). Hilliardella (~10 spp.) is mostly restricted to South Africa (Swelankomo et al. 2016). De Candolle, in a letter sent to Webb (dated April 13, 1833, document #73.9.1–73.9.6), mentioned that he greatly cherished the friendships of Webb and of Sabin Berthelot, and had the intention of honoring them by dedicating a genus from Greece (under the name Webbia) to Webb (Figure 9A) and the generic name Berthelotia to Berthelot; both generic names were published in 1836 (De Candolle 1836: 72, 375). Curiously, the genus *Webbia* DC. is not from the Mediterranean but from Africa.

Karl Schultz Bipontinus (1805–1867) also described Webbia Sch.Bip. (Asteraceae: Astereae, "Genus dicabi amico clarissimo Philippo Barker Webb"⁵), as a monotypic genus (W. kraussii Sch.Bip.) endemic to South Africa (Walpers 1843: 970, Figures 6B and 10). Unlike the almost coincident date of publications of Webbia Spach (Jun 1836) and Webbia DC. (Oct 1836), Schultz Bipontinus was aware of Webbia DC., which is evident from the following remark (p. 970, footnote): "WEBBIA DC. {DC. Prodr. V. 72. - Endl. Gener. plant. no. 2212. – Wlprs. Repert. bot. syst. II. 541.) a me consideratur ut generis Vernonieae sectio satis naturalis" (sic). Furthermore, Walpers (1842: 386) was aware of Webbia Spach and treated it as a synonym of Hypericum L.

Currently, Webbia kraussii is identified as Nidorella obscura (DC.) J.C.Manning & Goldblatt (Manning and Goldblatt 2012: 794). Nidorella Cass. (±13 spp.) is a sub-Saharan African genus that has its center of taxonomic diversity in South Africa (Hilliard 1977, Herman et al. 2000). In a letter (Figure 9B) sent to Webb, Schultz Bipontinus also informed Webb about his plans to dedicate to him a new genus from South Africa under the name Webbia (letter dated April 17, 1842, document #327.41.1–327.41.1). Schultz Bipontinus (1844–1850) wrote the Asteraceae treatment for Histoire Naturelle des Îles Canaries, and further evidence for the friendship that he had with Webb are the 52 letters that they exchanged between 1842 and 1850.

It is worth mentioning that although Webb was aware of the earlier *Webbia* names published in 1836, he probably followed the taxonomy of those two names in Walpers's (1842, 1843) works. Furthermore prior to the publication of the three genera described under *Webbia*, in 1836 and 1843, the Spanish botanist Jose A. Pavón (1754–1840) also had plans to dedicate a genus to him using this name (A. Reyes pers. comm.), as acknowledged by Webb in a letter (Figure 10C) to Pavón (dated September 3 1826, document #272.1.1.0). Pavón did not in the end publish any generic name honoring Webb, but he and Webb remained in contact and part of Pavon's herbarium collections from the Neotropics was eventually added to Webb's herbarium (Steinberg 1977).

In this article we review the nomenclature and botanical history of taxa that have been assigned to the three different genera that were described using the name of *Webbia*. Previous nomenclature diagnoses for *Webbia* Spach (Robson 1996: 133–135), *Webbia* DC.

³ We have dedicated this genus to Mr. Ph. Barker-Webb, famous English botanist, author (jointly with Mr. Sabin Berthelot) of a magnificent work on the natural history of the Canary Islands.

⁴ Honoring the talented English botanist P.B. Webb tireless explorer of the East, North Africa, and the Canary Islands.

⁵ Genus dedicated to my most famous friend Philip Barker Webb.



Figure 6. Selection of photos of species that were originally described within *Webbia* Spach, *Webbia*, DC. or *Webbia* Sch.Bip. in habitat. Accepted names are found in nomenclature diagnoses. (A) *Webbia canariensis* (L.) Webb & Berthel. (B) and (C) *Webbia kraussii* Sch.Bip. (D) and (E) *Webbia hirsuta* DC. (F) *Webbia aristata* DC. Photo credits: Arnoldo Santos-Guerra (A); Rich Hoyer (B, C); and John Manning (D–F).



Figure 7. Distribution map of *Webbia* Spach (Guttiferae), accepted name *Hypericum* L. sect. *Webbia* (Spach) R.Keller, monospecific taxon that encompasses *H. canariense* L. Based on Sequeira (pers. comm.) and Gobierno de Canarias (2022).

(Hilliard 1977: 41–43, Jeffrey 1988: 219, 223, 243, Robinson 1999: 233, Swelankomo et al. 2016, Van Wyk and Klopper 2021), and *Webbia* Sch.Bip. (Hilliard 1977: 92) were revisited. Besides the three *Webbia* generic names, the New Guinea palm genus *Barkerwebbia* Becc. was also dedicated to Webb in the first issue of the journal *Webbia* (Beccari 1905: 281, *"Ho dedicato il nuovo genere Bark-*



Figure 8. Distribution map of *Webbia* DC. (Asteraceae: Vernonieae). Filled dots: *Webbia serratuloides* DC. Unfilled dots, species of *Webbia* DC. that are currently placed in *Hilliardiella* H.Rob. Based on Swelankomo et al. (2016) and Several Authors (2022).



Figure 9. Distribution map of the monotypic genus Webbia Sch.Bip. (Asteraceae: Astereae), accepted name Nidorella obscura (DC.) J.C.Manning & Goldblatt. Based on Several Authors (2022).

erwebbia a Filippo Barker Webb nella ricorrenza del 50° anniversario della sua morte"6). Its nomenclature and systematic placements have been reviewed by Trudgen and Baker (2008) and by Petoe and Barker (2019), and currently Barkerwebbia is included within Heterospathe Scheff., a genus with a wider distribution from the Philippines to New Guinea, Moluccas, Micronesia, Vanuatu, and Fiji. A revision of the botanical history of Barkerwebbia, however, is not the scope of this article.

Webbia Spach⁷ (Guttiferae)

Webbia Spach, Hist. Nat. Veg. Phan. 5: 408 (June 1836)

Hypericum sect. Webbia (Spach) R.Keller in Engl. & Prantl, Nat. Pflanzefam 3(Abt. 6, Lief. 95): 211. (7 Nov. 1893)

Webbia platysepala Spach, Hist. Nat. Veg. Phan. 5: 410 (June 1836), as 'platypetala'; Ann. Sci. Nat. Bot., ser. 2. 5:

 $^{^6}$ I have dedicated the new genus Barker webbia to Philip Barker Webb in the $50^{\rm th}$ anniver sary of his death.

⁷ Accepted names indicated in bold font

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Figure 10. Excerpts from Webb's correspondence that highlight the use of the name *Webbia* as intended to describe genera to honor him. Name *Webbia* is shown inside red squares. (A) Letter from Augustin Pyramus De Candolle, dated April 13, 1833, document #73.9.1–73.9.6. (B) Letter from Karl Schultz Bipontinus, dated April 17, 1842, document #327.41.1–327.41.1. (C) Letter to Jose A. Pavón, dated September 3 1826, document #272.1.1.0. Courtesy of *Biblioteca di Scienze – Botanica, Università degli Studi di Firenze*[®]. (A) and (B) are posted online as part of the Humboldt Project [https://fundacionorotava.es/humboldt/library/correspondence/; *Max-Planck-Institut für Wissenschafttgeschichte* (Germany) and the *Fundación Canaria Orotava de Historia de la Ciencia* (Tenerife, Canary Islands, Spain)].

356 (June 1836), lectotype designated by Robson (1977: 332).

Hypericum canariense L., Sp. Pl. 2: 784. 1753

Type: *Hypericum frutescens, canariensis, multiflorum canariense* [Hort. Cliff.: 381, no. 9], lectotype designated by Wijnands (1983: 109), BM000646815 (photo!).

(=) Webbia canariensis (L.) Webb & Berthel., Hist. Nat. Îles Canaries (Phytogr.) 1: 48 (Oct. 1836)

(≡) *Hypericum debile* Salisb., Prodr. Stirp. Hort. Chapel Allerton: 369 (Nov. – Dec. 1796), *nom. illeg. superfl.* pro *H. canariense.*

(≡) *Hypericum corymbosum* Moench, Methodus Suppl.: 41 (May 1802), *nom. illeg. superfl.* pro *H. canariense*, non *H. corymbosum* Muhl. ex Willd., Spec. Pl. 3(2): 1457 (Nov. 1802)

(=) Hypericum floribundum Aiton, Hort. Kew 3: 104. 1789

Type: Madeira. Fr. Masson (lectotype designated by Robson (1996: 134), BM000617764 (photo!); Madeira, *Masson* (isolectotype BM000617765 (photo!)).

(=) Webbia floribunda (Aiton) Spach, Hist. Nat. Veg. Phan. 5: 410 (June 1836)

(=) Hypericum canariense var. floribundum (Aiton) Bornm., Bot. Jahrb. Syst. 33(3): 453 (Dec. 1903)

(=) Webbia canariensis var. floribunda (Aiton) Pit. & Proust, Iles Canaries: 134. 1909

(=) *Hypericum canariense* var. *montanum* Buch, Abh. K. Akad. Wiss. Berlin, Phys. Kl. 1816-1817: 382. 1817, nom. nud., as 'montana'.

(=) *Hypericum canariense* var. *salicifolium* Choisy in DC., Prodr. 1: 544 (Jan. 1824)

Type: Not cited (presumed: in insulis Canariis).

(=) *Hypericum canariense* var. *triphyllum* Choisy in DC., Prodr. 1: 544 (Jan. 1824)

Type: Not cited (presumed: in insulis Canariis).

(=) Webbia platysepala Spach, Hist. Nat. Veg. Phan. 5: 410 (June 1836), as 'platypelata'; Ann. Sci. Nat. Bot., ser. 2. 5: 356 (June 1836).

Type: *Webbia platysepala* Nob. Ténériffe. Webb (holo-type P05151177 (photo!).

(=) *Hypericum platysepalum* (Spach) Steud., Nomencl. Bot. 2nd ed. 1: 789 (Dec. 1840), as '*platypetalum*'.

(=) *Hypericum platysepalum* (Spach) Walpers Repert. Bot. Syst. 1: 386 (Nov. 1842)

(≡) *Hypericum canariense* var. *platysepalum* (Spach) Bornm., Bot. Jahrb. Syst. 33(3): 453 (Dec. 1903), as '*platy-sepala*'.

(≡) Webbia canariense var. platysepala (Spach) Pit. & Proust, Iles Canaries: 134. 1909, as 'platypetala'.

(=) Webbia heterophylla Spach, Hist. Nat. Veg. Phan. 5: 409 (June 1836)

Type: not found.

Typification notes

Spach (1836a, b) published two works that included descriptions for his new genus *Webbia*. The cover of *Historie Naturelle des Végétaux* (Spach 1836a) clearly shows

that it was issued in June 1836. The second work (Spach 1836b), was included in the fifth volume of Annales des Sciences Naturelles, and according to Stafleu and Cowan (1985: 768) this was also issued in June 1836. The same publication dates for these two publication create confusion regarding the priority between the two publications. We have chosen the publication by Spach (1836a) as having priority. There are two reasons for our assessment. Firstly, the species name "Webbia platypetala" was published in Historie Naturelle des Végétaux (Spach 1836a). However, in Annales des Sciences Naturelles, the epithet "platypetala" was corrected to "platysepala" by Spach who remarked as follows: "platypetala ex errore typographico" (Spach 1836b). Secondly, Spach (1836b) indicated that W. heterophylla, a species that was described by him in the Historie Naturelle des Végétaux (Spach 1936a) was included in W. canariensis.

Webbia DC.⁸ (Asteraceae: Vernonieae)

Webbia DC., Prodr. 5: 72 (Oct. 1836), nom. illeg., non Webbia Spach, Hist. Nat. Veg. Phan. 5: 408 (June 1836)

Type: Webbia pinifolia (Lam.) DC. (Conyza pinifolia Lam., Vernonia pinifolia (Lam.) Less.), lectotype designated by Robinson (1999: 229) = Hilliardiella capensis (Houtt.) H.Rob. in Robinson et al., PhytoKeys 60: 87 (Feb. 2016)

(=) *Hilliardiella* H.Rob., Proc. Biol. Soc. Washington 112: 229 (Mar. 1999)

Type: Hilliardella pinifolia H.Rob., nom. invalid. (Conyza pinifolia Lam., Vernonia pinifolia (Lam.) Less.).

(=) *Vernonia* subsect. Hilliardianae S.B.Jones, Rhodora 83: 66 (Jan. 1981)

Type: Vernonia oligocephala (DC.) Sch.Bip. in Walpers (Webbia oligocephala DC.).

(=) *Crystallopollen* Steetz in Peters, Reise Mossambique 6 (Bot., 2): 363. 1864. (unplaced accepted genus (J.C. Manning pers. comm.; Manning and Govaerts, in prep.).

Type: *Crystallopollen angustifolium* Steetz. Polydora Fenzl, Flora 27: 312. 1844, *nom. nud.* (lectotype designated by Robinson (1999: 230)).

(=) *Polydora* Fenzl ex H.Rob., Proc. Biol. Soc. Washington 112: 232 (Mar. 1999), *nom. illeg.* and superfl. & illegitimate for *Crystallopollen*.

Type: *P. serratuloides* (DC.) H.Rob. (Webbia serratuloides DC., "Polydora stoechadifolia Fenzl", invalid.).

Vernonia smithiana Less., Linnaea 6: 638. 1831

Type: Democratic Republic of the Congo, Congo – Chrⁿ Smith, C. *Smith s.n.* (holotype BM013860195 (photo!); Fl. Afr. Trop iii: 276 (isotype, K000272867 (photo!).

(=) Webbia smithiana (Less.) DC., Prodr. 5: 72 (Oct. 1836)

(=) *Hilliardiella smithiana* (DC.) H.Rob., Proc. Biol. Soc. Washington 112: 230. (Mar. 1999)

Erigeron capensis (as '*capense*') Houtt., Nat. Hist., Deel [Part] 2, 10: 629 (June 1779)

Type: Illustration in Houtt., Nat. Hist. Deel [Part] 2, 10: t. 69, f. 2 (June 1779), lectotype here designated.

(=) *Cacalia capensis* (Houtt.) Kuntze, Rev. Gen. 3(2): 138 (Sept. 1898)

(=) Vernonia capensis (Houtt.) Druce, Rep. Bot. Exch. Cl. Brit. Is. 4 (6): 651 (June 1917)

(=) *Hilliardiella capensis* (Houtt.) H.Rob. in Robinson et al., PhytoKeys 60: 87 (Feb. 2016)

(=) Conyza canescens L.f., Suppl.: 367 (Oct. 1782)

Type: South Africa, Cape, Thunberg 334 (holotype LINN 993.7 (photo!); possible isotype: UPS-THUNB (19376 — microfiche!).

(=) Conyza pinifolia Lam., Encycl. 2: 86 (Oct. 1786)

Type: C B Sp Musée royal (illeg.) Berlin, Krebs 1830, (G-DC, G00464328 (photo!), neotype here designated); isoneotype: P (P022845 (photo!).

(≡) *Vernonia pinifolia* (Lam.) Less., Linnaea 4: 257 (1829), non *V. canescens* Kunth in Humboldt et al., Nov. Gen. Sp. 4 (folio ed.): 27 (Dec. 1818)

(=) Webbia pinifolia (Lam.) DC., Prodr. 5: 72 (Oct. 1836)

(=) Hilliardiella pinifolia H.Rob. [as "(Less.) H.Rob."] in

⁸ Accepted names are indicated in bold font

Proc. Biol. Soc. Washington 112: 230 (Mar. 1999), nom. invalid.

(=) *Vernonia pinifolia* var. *glabrata* Harv. in Harvey & Sonder, Fl. Cap. 3: 51 (Feb.–June 1865)

Type: South Africa, Eastern Cape, Howieson's Poort, Hutton s.n., holotype (TCD).

Webbia hirsuta DC., Prodr. 5: 73 (Oct. 1836)

Type: "in Africa australi ad Tambukiland et Cafferland (*Eckl.! n. 725 et 1318*), ad Katriviersberg et Port Natal (Dreg.!)"; lectotype designated by Swelankomo et al. (2016): 42. South Africa, KwaZulu-Natal], Port Natal [Durban], R. I 1835 [sic. but evidently March/April 1832 fide Glen & Germishuizen (2010: 155), *Drège 3778*, G-DC-G00464307 (photo!); isolectotype, P021982 (photo!). Other original material: South Africa, KwaZulu-Natal] Katrivierberg, R.V. 1835 [sic. but evidently March/April 1832 fide Glen & Germishuizen (2010: 155)], *Drège 3778* (G-DC-G00464302 (photo!); South Africa, Eastern Cape] Tambukiland, 1834, *Ecklon 725* (G-DC-G00464305 (photo!); Kafferland (Kaffraria) 1835, *Ecklon 1318*, (G-DC-G00464305 (photo!).

(=) Vernonia hirsuta (DC.) Sch.Bip. in Walpers, Repert. Bot. Syst. 2: 947 (Dec. 1843)

(=) *Hilliardiella hirsuta* (DC.) H.Rob., Proc. Biol. Soc. Washington 112: 230 (Mar. 1999)

(=) *Vernonia hirsuta* var. *obtusifolia* Harv. in Harvey & Sonder, Fl. Cap. 3: 51 (Feb.-June 1865)

Type: South Africa, KwaZulu-Natal, Natal, Williamson s.n. (TCD); Gerrard & M'Ken 343 (TCD), syntypes.

Webbia nudicaulis DC., Prodr. 5: 73 (Oct. 1836)

Type: "in Africa australi ad Sz. Key et Basche legit. cl. Drege!" South Africa, Eastern Cape] Zw. Key and Basche (between Kei and Bashee rivers), R. IV, 1835 (sic. but evidently March/April 1832 fide Glen & Germishuizen (2010: 155), *Drège 5072*, (holotype G-DC-G00464303 (photo!).

(≡) Vernonia dregeana Sch.Bip. in Walpers, Repert. Bot. Syst. 2: 947 (Dec. 1843), as nom. nov., non Vernonia nudicaulis Less., Linnaea 6: 637 (1831).

(=) Cacalia nudicaulis (DC.) Kuntze, Revis. Gen. Pl. 2: 970 (Nov. 1891)

(=) *Hilliardiella nudicaulis* (DC.) H.Rob., Proc. Biol. Soc. Washington 112: 230 (Mar. 1999)

Webbia oligocephala DC., Prodr. 5: 73 (Oct. 1836)

Type: "in Africa australi ad Zw. Omsanculo et Port Natal legit cl. Drege!" South Africa, KwaZulu-Natal] Zw. Omsamculo (and Port Natal [between Umzimkulu and Durban), R.I. 1935 (sic. but evidently March/April 1832 fide Glen & Germishuizen (2010: 155), *Drège 5076* (holotype G-DC, G00464306 (photo!).

(=) Vernonia oligocephala (DC.) Sch.Bip. in Walpers, Repert. Bot. Syst. 2: 947 (Dec. 1843)

(=) *Vernonia kraussii* var. *oligocephala* (DC.) Harvey in Harvey & Sonder, Fl. Cap. 3: 51 (Feb.–June 1865)

(=) *Hilliardiella oligocephala* (DC.) H.Rob., Proc. Biol. Soc. Washington 112: 230 (Mar. 1999)

(=) Webbia elaeagnoides DC., Prodr. 5: 73 (Oct. 1836)

Type: "in Africa australi ad Zw. Omsamwubo et Omsanculo legit cl. *Drège*!". South Africa, KwaZulu-Natal] Zw. Omsamwubo and Omsanculo (between Umzimvubu and Umzimkulu), R.III. 1835 (sic. but evidently March/ April 1832 fide Glen & Germishuizen (2010: 155), *Drège* (holotype, G-DC, G00464319 (photo!).

(=) Vernonia kraussii Sch.Bip. in Walpers, Repert. Bot. Syst. 2: 947 (Dec. 1843), as nom. nov., non Vernonia elaeagnoides Kunth, in Humboldt et al., Nov. Gen. Sp. ed. Fol. 4: 33 (Apr. 1820).

(≡) *Cacalia elaeagnoides* (DC.) Kuntze, Revis. Gen. Pl. 3: 2: 968 (Dec. 1891), as '*eleagnodes*'.

(=) *Hilliardiella elaeagnoides* (DC.) N.Swelankomo & J.C.Manning, S. African J. Bot. 106: 50 (Sept. 2016)

Webbia aristata DC., Prodr. 5: 73 (Oct. 1836)

Type: "ad Cap. Bonae Spei ad Katrivier (Dreg. sp. exs.), ad Zw. Key et Basche (Dreg.!), in territorio cesso et Kafferland (Eckl.! et Zeyh.). South Africa, Eastern Cape) Zw. Key and Basche (between Kei and Bashee rivers) R. IV 1835 (sic. but evidently March/April 1832 fide Glen & Germishuizen (2010: 155), *Drège 5074* (lectotype designated by Hilliard (1977: 43): G-DC, G00464322 (photo!)).

(≡) Vernonia natalensis Sch. Bip. in Walpers, Repert. Bot. Syst. 2: 947 (Dec. 1843) [as nom. nov., non Vernonia aristata Less., Linnaea 4: 313 (1829) (=) Cacalia aristata (DC.) Kuntze, Rev. Gen.: 138. 1898

(=) *Hilliardiella aristata* (DC.) H.Rob., Proc. Biol. Soc. Washington 112: 230 (Mar. 1999)

Webbia serratuloides DC., Prodr. 5: 73 (Oct. 1836)

Type: "in Senegambiae locis arenosis ad Albreda secus flumen Gambie Martio sere defloratam legit cl. Perrottet ... (v. s. specim. foem. a cl. Perrottet comm.)". [Gambia] Albreda [illegible] sablonneuse [illegible] Gambia, Mars 1829, Perrottet s.n. (holotype, G-DC, G00464329 (photo!).

(=) Vernonia perrottetii Sch.Bip. in Walpers, Repert. Bot. Syst. 2: 947 (Dec. 1843), as nom. nov., non Vernonia serratuloides Kunth, in Humboldt et al., Nov. Gen. Sp. 4(ed. Fol.): 26 (Dec. 1818)

(=) *Polydora serratuloides* (DC.) H.Rob., Proc. Biol. Soc. Washington 112: 233 (Mar. 1999)

Typification notes

The works of Hilliard (1977), Jeffrey (1988), Robinson (1999), Swelankomo and Manning (2016), and Van Wyk and Klopper (2021) provided the basis for our nomenclatural study of names associated with Webbia DC. We concur with the conclusions of these studies, but we make a few amendments to their typifications. Firstly, we have assigned bar-code numbers to type specimens identified in these previous works. Furthermore, we have identified the holotype of Vernonia smithiana as one of the two isotypes listed by Jeffrey (1988, BM013860195). The original description of this species was based on material collected by the Norwegian botanist Christen Smith (1785–1816) during the ill-fated expedition that he and others undertook to the Congo River region in the summer of 1916 (Lessing 1831: 639). The protologue refers to a specimen that was part of the herbarium of the Danish botanist J.W. Hornemann (1770-1841). Hornemann's herbarium is located in C with additional collections in nine other institutions (Stafleu and Cowan 1979: 333). We could not locate specimens of this species in any of these ten herbaria, and therefore, have accepted BM013860195 as the holotype with an isotype housed in K (K000272867).

The holotype of *Webbia serratuloides* was also located during our study. The identified specimen (G00464329) is housed in De Candolle's herbarium (G-DC) and matches the morphological features and collection provenance indicated in the protologue (De Candolle 1836: 73). The correct nomenclatural placement of this name is part of an ongoing project (John C. Manning pers. comm) and is not included in this contribution.

Furthermore, in our study of *Erigeron capensis*, we designate the illustration included in the species protologue as the lectotype [Houttuyn 1779: 629, plate 69 (Fig. 2)].

We provide a revised interpretation for the name Webbia pinifolia (Lam.) DC., as a superfluous but legitimate name for Erigeron capensis Houtt. (1783) on the following grounds. In the protologue of his new species Conyza pinifolia, Lamarck (1786), at the end of the second paragraph of this species treatment, included the following two synonyms: "Elichrysum peregrinum angustifolium ... calyce spinoso candiodo. Seb. Mus. I. p. 38. Tab. 23. f. 3. An Conyza canescens Lin. f. Suppl. 367 [1782]". Of these, "Elichrysum peregrinum angustifolium ... calyce spinoso candiodo" is a polynomial and does not affect the status of the name Conyza pinifolia. Regarding the citation of "An Conyza canescens," it is noted here that in Latin disjunctive clauses, the term 'an' is interpreted as denoting uncertainty by itself, without a verb of doubting, and in disjunctive interrogations, 'an' is read as "not, whether." In other words, the doubtfully cited synonym C. canescens does not cause superfluity and illegitimacy to the name C. pinifolia Lam., and the Lamarck name is legitimate and can serve as a basionym.

Subsequently, Lessing (1829) published Vernonia pinifolia and cited Conyza pinifolia as the basionym. Furthermore, in contrast to Lamarck's treatment, Lessing included C. canescens as a synonym. It is emphasized here that the new combination V. pinifolia was based on the legitimate epithet-bringing synonym C. pinifolia. Such new combinations, if they include older legitimate synonyms at the same rank, are nomenclaturally superfluous but not illegitimate (vide Art. 52.4). In this case, because of the existence of V. canescens Kunth (1818) for a New World taxon, the name V. pinifolia is neither nomenclaturally superfluous not illegitimate.

For his *Webbia pinifolia*, De Candolle cited *Conyza pinifolia* and *Vernonia pinifolia* as synonyms but implicitly excluded *C. canescens*. However, he included *Erigeron capensis* Houtt. as a synonym. Thus, as illustrated by Art. 52, the new combination *W. pinifolia* (Lam.) DC. was nomenclaturally superfluous for *E. capensis*, but not illegitimate when made.

Within his new genus *Hilliardiella*, Robinson (1999: 230) proposed a new combination as "*Hiliardiella pinifolia* (Less.) H. Rob." and cited the basionym as "*Vernonia pinifolia* Less., Linnaea 4:257. 1829." For new combinations made after 1952, direct references to the basionyms are mandatory (vide Art. 41.5). As mentioned above, *Vernonia pinifolia* itself is a new combination with a direct reference to *Conyza pinifolia*, and Robinson erred

in his basionym citation. Since Lessing cited C. pinifolia as the basionym and since Robinson (1999: 230) did not refer to the basionym directly, his intended new combination was invalid when made (Art. 41.8(a) and Ex. 25 apply). It is mentioned here that as per Art. 41.8(d), on or after 1 January 1953, citation of an indirect reference to the basionym is treated as a correctable error, not affecting the valid publication of new combination when the resulting new combination would otherwise be the validly published name of a new taxon. In other words, had Robinson (1999: 230) provided or referenced a Latin description and holotype citation, the proposed "Hiliardiella pinifolia (Less.) H. Rob." would be corrected to "Hiliardiella pinifolia (Lam.) H. Rob." and treated as a valid new combination. In this case, Robinson did directly refer to the Latin description of Vernonia pinifolia but did not cite type or holotype. Therefore, Art. 41.8(d) does not apply, and the published new combination "Hiliardiella pinifolia (Less.) H. Rob." is invalid.

Regarding the type of the Lamarckian name Conyza pinifolia, the protologue states "Cette plante croît au Cap de Bonne Espérance, & nous a été communicquée par M. Sonnerat."9 Pierre Sonnerat (1748-1814) was a French naturalist who travelled and collected both plant and animal specimens primarily in Mauritius but with brief stopovers in Cape Town in South Africa in 1773 and 1782. Sonnerat did not venture much beyond the immediate vicinity of Cape Town, and as the species does not occur there it is unlikely that he himself collected it. His core herbarium is in P with duplicates in C, G, LE, LINN, STB (Stafleu and Cowan 1985: 745). We have not found any material attributable to Conyza pinifolia Lam. in the collections of Sonnerat housed in these herbaria. Therefore, we designated a specimen that was collected at the Cape of Good Hope by the German apothecary and naturalist Georg L. E. Krebs (1792-1844) as the neotype. The selected specimen is housed in G-DC (G00464328), it was studied by De Candolle, and it is mentioned in his account for Webbia pinifolia, matching the morphological description provided in Lamarck's (1786) protologue. An isoneotype was found in P (P022845). Krebs died in South Africa and collected in this country over the period 1817-c. 1840.

Webbia Sch.Bip. (Asteraceae: Astereae)

Webbia Sch.Bip., in Walpers, Repert. 2: 970. (Jan. 1843), nom. illeg.

Type: Webbia kraussii Sch.Bip. in Walpers, Repert. 2: 971 (Jan. 1843)

Nidorella Cass. in F.Cuvier, Dict. Sci. Natl., ed. 2: 469 (Apr. 1825)

Webbia kraussii Sch.Bip. in Walpers, Repert. 2: 971 (Jan. 1843)

Type: lectotype [inadvertently by Hilliard (1977: 92), ("as holotype")]: *Conyza kraussii* C.H.Schultz est novum genus Karelinae Less. proximum ex recensione seriori autoris, sed, nondum denominatum. N. 602 in collibus prope Knysna River (TUB004915 (photo!); isolectotypes, N. 602 in collibus prope Knysna Gorge, P031296 (photo!); in collibus prope Knysna River, *Dr. Krauss*, (P031297 (photo!); in collibus prope Knysna River, *Krauss*, (W0012365 (photo!).

(=) Conyza obscura DC., Prodr. 5: 387 (Oct. 1836)

Type: Omtata and Omsamwubo [between Umtata and Umzimvubu] R.III, Drège 3733 (lectotype here designated, G-DC, G00450339 (photo!)); isolectotypes, Wittebergen [Witteberg], *Drège 3733*, G-DC, G00450317 (photo!); Wittebergen [Witteberg] R. VIII, *Drège 3733*, G-DC, G00450343 (photo!),

(=) *Nidorella obscura* (DC.) J.C.Manning & Goldblatt, Strelitzia 29: 794 (2012)

(=) *Conyza obscura* var. *calvescens* DC., Prodr. 5: 387 (Oct. 1836)

Type: Langkloof, Drège 5717 G-DC (holotype G00450209 (photo!).

Typification notes

Webbia kraussii was known to Harvey (1865: 114) only from the description, and he treated it as a 'doubtful genus-probably a species of *Conyza*'. It was subsequently placed in synonymy under *Conyza obscura* by Hilliard (1977) in her regional monograph of the family for Natal (South Africa). Hilliard's citation of the TUB specimen as the "holotype" of the name can be construed as an act of effective lectotypification as it was inadvertently done in 1977, and at that time, it was not necessary to include a typification statement "here designated" or its equivalent, a phrase required for lecto-, neo-, and epitypifications done on or after 1 January 2001 (Shenzhen Code Art. 7.11; Turland et al. 2018).

Regarding the type of *Conyza obscura*, Hilliard (1977) listed five specimens as 'Types', and thus did not typify

⁹ This plant grows in the Cape of Good Hope and it was communicated to us by Mr. Sonnerat.

the name. We found *Drège 3733* at G-DC [G00450339] as the best material agreeing with the description and choose it as the lectotype.

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