THE BRAZILIAN HERBARIUM OF AXIMILIAN, PRINCE OF WIED

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ABSTRACT

In 1815 Prince Maximilian of Wied made his expedition to Brazil in order to study its natural history and indigenous population. Upon returning to Germany in 1817, he took with him extensive and detailed field notes and rich ethnological, zoological and botanical collections. His analysis of the journey was published in a comprehensive two-volume travel account, *Reise nach Brasilien in den Jahren 1815 bis 1817* ("Journey to Brazil in the years 1815 to 1817"). Although Maximilian is well-known for his ethnological and zoological studies azil, his contribution to botany is also important and has received little attention by orders. Here, I present a summing up of the results obtained from the study of Maximilian's private herbarium of Brazilian plants, which has been contextualised within the available information on his expedition and the regions of the country visited by him.

The private herbarium of Maximilian Alexander Phillip, PRINCE OF WIED, was rediscovered in May 1998, in the library of the Palace of Neuwied, by Dr. Hans-Jürgen Krüger (Fürstlich Wiedisches Archiv) and the photo historian Wolfgang Horbert, when they were preparing the first exhibition of the collection of old photos owned by the family Wied. This herbarium was considered as missing for 20 years until Dr. Krüger forged ahead to a cabinet of difficult access, whose contents showed to be the 22 parcels of dried plants collected by Wied along 26 years. Approximately 7,000 plants were gathered between 1808 and 1834 in the homeland and from the journeys of the PRINCE to Brazil and the U.S.A. One parcel of 125 specimens refers to his botanical collection gathered in Brazil (1815-1817), another is related to his travel to North America (1832-1834), and 20 to the Westerwald (Rhineland-Palatinate, Germany), part of the old forested county Wied between the rivers Rhine, Lahn and Sieg, where WIED

hunted (Noll 2000; H.-J. Krüger, pers. comm.). An announcement of this special finding, *Aus* [dem] *Dornröschenschlaf geweckt*, written by Doris Ruch, was published by the Neuwied Rhein-Zeitung on April 5th 2000, after the communication by Dr. Hermann Josef Roth (Deutsch-Brasilianische Gesellschaft; Naturhistorischer Verein der Rheinlande und Westfalens – NHV) on April 4th 2000 (also in Roth 2001:146).

The objective of this article is not to write a biography of WIED, which can be found elsewhere (e.g., Wirtgen 1867; Wied 1954, 1969; Schach 1994; Roth 1994, 1995a, 1995b; Krüger 1999; Noll 2000). However, I present here some biographical remarks on him in order to provide a summarised account of his lifework and very general aspects of his time period.

PRINCE MAXIMILIAN, at 32 years of age, finished the Napoleonic Wars, changed the career of the arms for the scientific life (despite the various existing biographies of WIED, there is a scarcity of sources related

to his zoology and to botany works). Influenced by the famous German explorer and scientist Alexander von HUMBOLDT. who was not able to explore Brazil for political reasons, Wied decided undertake an expedition to the country, then opened to foreign researchers (Löschner 1988:12; Vanzolini 1996:209-210; Diggs 2008). According to Schach (1994:9, 1995:156; see also Pijning 1995: 27), WIED first met HUMBOLDT in Berlin in 18041, when the wealthy Prussian baron had just returned from his notorious fiveyear exploration of large parts of Latin America (However, according to H.J. Roth, pers. comm., this is all just speculation and the correct date should be 1805). This meeting was of decisive importance to the young prince, exerting the strongest effect upon WIED (according to H.J. Roth, pers. comm., it was not the meeting with HUMBOLDT but the account of his American journey with BONPLAND that really influenced WIED). For Karl Viktor Prinz zu Wied (1954:17, apud Schach loc. cit., 1969:14), "there is not the slightest doubt that his paramount interest in the American continent derived from the influence of the older and famous scholar, who henceforth was to remain his model, friend and mentor. From this time on the prince's most ardent and firmest purpose was an overseas expedition". However, as pointed out by Schach loc. cit., the belief that HUMBOLDT encouraged WIED to visit and write about Brazil, in the same manner that Johann Georg Adam FORSTER stirred up HUMBOLDT's desire to sail overseas and in order to supplement his own Latin-American findings, might be misleading. Actually, "it is also possible that HUMBOLDT merely helped focus and fortify plans that WIED was already entertaining". According to Schach loc. cit. this possibility seems "all the more likely when we review the prince's childhood, lengthy military career. and education, which together seem to comprise not only an almost ideal preparation but also irresistible motivation for his two voyages to the New World. After the initial meeting of the naturalists they did not see each other again until 1814". On 31 March 1814, the day after his last battle, WIED entered Paris with the victorious allied armies (Wied 1969:14). It was on this occasion that he met HUMBOLDT and Aimé BONPLAND. The latter, specially, was fond of WIED according to unpublished correspondence (H.J. Roth, pers. comm.).

Cascudo (1977:73) starts his essay about WIED quoting that "[a] naturalist prince has the reputation of being a discontented amateur. Travels through forests, wild game hunts, the dangers of mountaineering are marks of personal virtue when practised by a man without genealogical pretensions. But a Highness, be he Royal or Serene, does not have the right to show courage. His role is uselessness. Or so it is said. In another species of animal the genetic strain would be noted and singled out. Amongst men it is merely an extra burden of collective vices and concentrated imperfections over the centuries. A 'prince' is virtually a potential criminal. Only the opportunity is lacking". Nevertheless, when WIED left the palace of Neuwied he was not a raw natural history student with no personality or fixed ideas. He was over 30 years of age, a Major² in the army, had been awarded the Iron Cross in battle and had entered Paris with the allied army. He came to Brazil and compiled an excellent and extensively documented book. WIED had read and made relevant quotations from authors of works about the land and people of Brazil, viz.

¹ According to Noll (2000:31), there is considerable discussion as to when WIED first met with Alexander von HUMBOLDT. However, as indicated by Noll *loc. cit.*, in a letter to Rudolf SCHINZ from May 28, 1814, the PRINCE himself clearly stated that "... [Alexander von] HUMBOLDT and [Aimé] BONPLAND now also belong to the number of my acquaintances".

Hans Staden, Jean De Léry, Barlaeus, Piso, Marcgraf, Padre Simão de Vasconcellos, Henry Koster, La Condamine, Southey, Thévet, Eschwege and John Mawe, among others.

WIED's expedition to Brazil can be located historically in the time of liberation from Napoleon's France and the political revolutions leading to the National Assembly of Frankfurt (Diggs 2008). WIED pursued his naturalist interests at the University of Göttingen (Matr.-Nr. 22988 on 16 April 1811³), although he was known for having acquired most of his knowledge on his own through substantial reading, an autodidact (Roth 1995a:13). He was passionately interested in ethnology. His enthusiasm for physical and natural sciences and world history was kindled by one of his tutors, Lieutenant Christian Friedrich HOFFMANN. Though HOFFMANN did not sufficient extensive knowledge to impart a vocation, he gave him the initial encouragement, and discovered in the young PRINCE what Lord BEACONSFIELD was to call "the mystery of predisposition" (Cascudo 1977:81). At Göttingen, "the first academic center of geography in Germany ... and the first academic center of anthropology history", WIED came under the influence of Johann Friedrich Blumenbach, who taught there from 1775 to 1840 and succeeded in inspiring several students to undertake scientific expeditions to distant, unexplored regions (Ackerknecht 1955:83; Schach 1995:156). At least eight of his German students had made expeditions through countries not yet explored. They had not been expeditions exempted of hazards, since four of the travellers died under tragic circumstances. However, all of them sent highly important material to Göttingen (Pijning 1995:28). Among the more fruitful expeditions were those of HUMBOLDT and WIED to the Americas.

According to Diggs (2008), at the beginning of the 19th century Germany was a conglomerate of states. German society was one in which "to survive childhood was an achievement" (Blackbourn 2003:2-7) and interaction between social classes was regulated by a strict set of rules. Travel occurred more frequently than before, however, for different reasons depending on the social class of the travellers (Blackbourn 2003:8). Educated members of the social elite, like HUMBOLDT and WIED, travelled in pursuit of knowledge, while those at the bottom of society, trying to flee abject poverty, emigrated to places like North and South America. Brazil became a point of particular interest in Germany for

² As pointed out by Schach (1994:7), many of the brief statements about WIED readily available in English are not free of misinformation. One of them is that the prince had entered Paris with the conquerors of NAPOLEON as a Major-General in the Prussian army (Cascudo *loc. cit.*, for instance, retains the inflated military rank). According to Schach *loc. cit.*, WIED could not have advanced to the rank of major general after only two years of military training and six years of active military service. In fact, after declining proffered commissions in the Hessian and Austrian armed forces, in 1800, at the age of eighteen, WIED accepted an invitation, made personally by KING FRIEDRICH WILHELM III, to enter the Prussian army at the rank of lieutenant (Noll 2000). Following two years of training in the royal guard, he was assigned to the army as a captain in 1802. He took part in the disastrous battle of Jena, 14 October 1806, and was captured by the French on 28 October at Prenzlau. Released in an exchange of prisoners, the prince retired to his scientific pursuits. With the outbreak of the Wars of Liberation in 1813 WIED returned to active military service as major in the Third Brandenburg Hussar Regiment, from which he later transferred to the cavalry. During this time he participated in twelve battles. For distinction in the battles of La Chaussée and Château Thierry the prince was awarded the Order of the Iron Cross (Wirtgen 1867:3; Wied 1969:14; Schach 1994:9; Roth 1995a:12). In 1840 he was awarded the title of major general in the royal Prussian army by KING FRIEDRICH WILHELM IV in recognition of his scientific achievements (Wied 1969:20; Schach 1994:15; Noll 2000).

³ At this time, according to Pijning (1995:28), WIED wrote to his Swiss friend Heinrich SCHINZ telling that he was in Göttingen for acquiring the knowledge lacking to him for undertaking the intended expedition to America.

historical and academic reasons: the opening of Brazil's borders to foreign explorers after the arrival of the Portuguese royal family in Rio de Janeiro (1808) was one of the reasons.

At that period, there was an emphasis on the unity of all knowledge, embodied most explicitly in the works of HUMBOLDT, and some of his followers (Sperber 2004:141). The philosophical approach to research, Friedrich Daniel Ernst Schleiermacher and Johann Gottlieb Fighte's idealism as well as Wilhem von Humboldt's neohumanism (Sperber 2004:145), gave way to the "empirical and analytical" approach of the explorer (Sperber 2004:142); Otto von KOTZEBUE referred to this approach as alles Messbare zu messen ("measuring everything measurable") (Brenner 1989:393). He adds that the empirical approach also includes the organization and interpretation of results. In this context, as pointed out by Noll (2005: 67), Wied's philosophical foundation was strongly rooted in the Enlightenment, the basis for his Weltanschauung, and the foundation of his narrative are the Linnaean landscapes, the layer of meanings most frequently celebrated and explored by the authors who had written about him. In the words by Noll loc. cit., referring to WIED's Reise in das Innere Nord-America ("Journey to the Interior of North America": which could be also extrapolated to the Reise nach Brasilien), '[h]ere the PRINCE is a true representative of the European scientific Reconnaissance and dissects. categorizes. measures. classifies the natural history he observes, whether flora, fauna, meteorology, geology, or even comparative anthropology. Inspired by Carl von Linné's Systema Naturae, travellers like WIED set off to distant shores to map a dazzling "New World" and to make order out of perceived chaos'. For Schach (1994:11: see also Wied 1969:15). WIED's interests were encyclopaedic and his method was descriptive and comparative. Modern specialization was still unknown, and Wied, unlike Humboldt, had little concern with developing scientific theory. He described and, with the help of specialists, classified everything that struck him as noteworthy. However, as demonstrated by Noll (2005:69), in a careful deconstruction of Wied's North American travel accounts, his narrative contains further array of hidden layers of meaning, since the Prince "was not only eyeing and describing the world as a naturalist, but also as a romanticist, aristocratic, male, and former Prussian officer".

Schach (1995:159) quotes that there are conflicting opinions regarding the major purpose of Wied's expedition to Brazil (but see Krüger 1999). He explored the southeastern regions of Brazil between 1815 and 1817, returning with a wealth of information about native South Americans. particularly the Purís and Botocudos, which has been considered his most important contribution to human knowledge. His treatise on the Botocudo Indians, Einige Worte über die Botocuden ("A few words about the Botocudos"), comprising the first chapter of the second volume of his travelogue, is a truly pioneering ethnographic work (Schach loc. cit.), the most complete documentation compiled of the period on those Indians (Cascudo 1977:73). Ratzel (1886:561) believed that WIED produced the most important work between that of MARCGRAF and MARTIUS (also quoted by Roth 2001:140). Ehrenreich (1891) wrote that the classical description of the Botocudos made by the PRINCE OF NEUWIED would in itself be of permanent value, he also studied the same Indians more than fifty years later. But Diggs (2008), in her thesis, has the opinion that despite WIED's informative description of native Brazilians, the text is still more about him and about establishing him as a credible heroic explorer than about the natives. Süssekind (1990:129) defined it as uma estratégia de afirmação da verdade ("a strategy of

affirmation of the truth") since WIED wrote a first-person narrative, chronologically organised, allowing the reader to follow the itinerary and the observations reported. He gave special emphasis to what was new and different, and rarely made comparisons with what could be familiar for the European reader (Domingues 1995:50). Still, WIED, as an enthusiastic ethnologist, presented native populations in a more positive, yet not idealised, and differentiated light than travellers who were not necessarily anthropologists. He saw them, not as noble savages, but as human beings at a different stage of development (Diggs 2008). However, according to Schach (1994:7), this is a misleading assertion like the one written by Thomas (1976:328) that WIED endeavored to portray the Indians of the upper Missouri "not as savages but as civilized individuals with acquired skills and mores ideally suited for life in a wilderness". Additionally, Noll (2005:77) has shown that other important aspect of Wied's ideological landscapes was his ethnocentricity. His ethnocentric discourse "effectively distances the European from the Native American, creating the classic other culture, which, in his mind, was not only different but subordinate to his own" (Noll 2005:78). Hence, in opposition to the belief that the PRINCE was "the meticulous observer who always viewed the landscapes he encountered with unreserved objectivity ..." (Noll 2005:79), as pointed out by several authors (e.g., Bechtolsheim 1984:39; Schach 1994:7; Scott 1996:1 apud Noll 2000). According to Noll (2000, 2005, pers. comm.), WIED is only objective in his Linnaean landscapes, and even this layer displays gaps as he has a preference, for example, for wooded landscapes and, thus, ignores grasslands. Pijning (1995:32) also registered that WIED had been successful in keeping impartiality and objectivity in his descriptions of nature, but not always being the case in relation to people, especially

those of the Luso-Brazilian society, for which the PRINCE had fallen in old stereotypes already known from the narrative of other travellers (Pijning 1995:27).

In turn, his collection and description of specimens are still highly zoological regarded. WIED collected terrestrial vertebrates and published about them. He had the particularity of publishing many new species in his travelogue (Reise, 1820-21). They had no formal descriptions, rather short diagnoses (but no species is doubtful), which were enriched by the geographical and ecological context. WIED also published several articles in scientific journals for the time. However, the structured mass of observations was published from 1825 to 1833 in a book of four volumes, Beiträge zur Naturgeschichte von Brasilien (Wied-Neuwied 1825-1833), which is considered one of the most pleasant zoological works ever written about South America (Vanzolini 1996). The book was published in parts and accompanied by an autonomous series of plates (Wied-Neuwied 1822-1831), Abbildungen zur Naturgeschichte Brasiliens, with some of them having the description of new species. Meanwhile the publication of the *Reise* and the subsequent works by WIED, other authors combined or not with him published diverse species of the prince as newly described. Hence, the species published in the Reise were "saved", while those in the Beiträge were "lost" in terms of the priority of authority. Later, WIED (1850) returned to treat the matter borne in the description of his voyage to Brazil, rectifying mistakes, refuting criticisms and adding knowledge to interested people in the issue⁴. According to Vanzolini (1996), WIED was a very fine zoologist, being a good mammalogist, doing well in Herpethology, but his field of excellence was the Ornithology. The two volumes on birds of the Beiträge are one of the most complete and stable faunistic surveys ever done. The technical level is superior, "the published

descriptions, in respect to minuteness of detail and the careful discrimination of nice points, are not excelled, and rarely equaled, in our best modern works", as appreciated by Allen (1889). Burmeister (1854-1856), author of the first survey of ornithology and *Mammalia* in Brazil nearly always referred to WIED as his principal source of information.

WIED travelled to Brazil at his own costs (see Krüger 1999 for details about the preparations of Wied's journey). He sailed via London to Rio de Janeiro in 72 days, accompanied by two servants, his brother's huntsman and experienced taxidermist David DREIDOPPEL and the family gardener Christian Simonis, both of them on loan from the house of Wied. They left London on 15 May 1815, on board the "Janus", of 320 tons, and arrived in the harbour of Rio de Janeiro on 16 July, stepping foot on land on the next day (Wied-Neuwied 1820a:7-26; Wirtgen 1867:3; Ratzel 1886:560; Cascudo 1977:83; Roth 1995b:18; Schach 1994:6, 1995:159; H.-J. Krüger, pers. comm.). Here they were welcomed and accommodated in the houses of Baron Georg Heinrich von Langsdorff - the Czar's Russian Consul General to Brazil [Farm "Mandiocca" (Krüger 1999), in Serra da Estrela, a well-known coffee plantation where he hosted numerous European explorers] since 1813, of Henry CHAMBERLAIN -British "Chargé d'affaires", of Lorentz Westin - the General Consul of Norway and Sweden in Rio, among others, during a stay from 17 July to 4 August. An unexpected protector for the PRINCE was the Minister and Secretary of State for Foreign and Overseas Affairs, António de Araújo e

AZEVEDO, COUNT DA BARCA (Cascudo 1977:86), who gave him numerous introductions to governors and letters recommending him warmly to the authorities in the interior (Wied-Neuwied 1820a:40).

Two other German naturalists, Georg Wilhelm Freyreiss and Friedrich Sellow, who were also guests in Langsdorff's house, were ready for a trip which was being planned to the northern regions of Brazil (Becher 1987). That would be sponsored by LANGSDORFF, who in return would receive the zoological collections for himself. Both had received letters recommendation to the authorities of the Brazilian Provinces, and the title "financed naturalists", granted by Brazilian Government, with an annual pension of 400:000 (400,000 'reis'). WIED, who was interested in having a journey to the interior of Brazil, accompanied Sellow and FREYREISS in their voyage, under the pseudonym of Baron von Braunsberg in order to maintain anonymity (Papavero 1971: 58). Although it has become commonplace the quotation that Sellow and Freyreiss were mere escorts of WIED, it is worth catching the reader's eye to the fact that the formers were already in Brazil before WIED's arrival. Freyreiss, zoologist and ornithologist, arrived in Brazil in 1813 and was an assistant to Baron Wilhelm Ludwig von Eschwege, then the director of the mining companies of Brazil. Sellow, a very accomplished botanist, zoologist and artist, embarked for Brazil in 1814. Their journey had been arranged already, as mentioned above, and they had the advantage of knowing the language and something of the

⁴ According to Cascudo (1977:108), in 1821 – 1822 Jean Batiste Benoîte Eyriès published the French translation of the *Reise*, which was a detailed work not always faithful to the original. Eyriès had translated MAWE and HUMBOLDT. Thus the PRINCE OF WIED's work became known in France and came to Brazil. Auguste de SAINT-HILAIRE attacked it immediately, commenting on Eyriès' errors and treating them as being part of WIED's text. The prince did not protest at Eyriès rash statements, being busy analysing the vast material he brought from Brazil, but years later replied to SAINT-HILAIRE with the interesting *Nachträge*, *Berichtigungen und Zusätze zu der Beschreibung meiner Reise im östlichen Brasilien*, replacing his observations in their right context. SAINT-HILAIRE did not reply.

habits of the people, but no obligations to Wied. It does not mean, however, that Wied did not have his own plans and ideas for the journey (see Krüger 1999). He decided to travel by the coast because it had not yet been studied. (Pijning 1995:28) and "the land and the aborigines there had not yet been 'assailed' by European civilization" (Schach 1994:11), which have been also quoted by Domingues (1995:45) and Costa (2008:34).

The three naturalists left Rio de Janeiro on 4 August 1815, taking 16 beasts of burden, each one carrying two wooden boxes covered by leather with the equipment, and 10 servants, some for treating the animals, others as hunters (Wied-Neuwied 1820a:40-41; Ueckermann 1996). From São Cristóvão (now a district of the city of Rio de Janeiro), they crossed by boat the Bay of Guanabara towards Praia Grande (now incorporated by the city of Niterói), going by the coast to Cabo Frio (until 8 September), Macaé, and Campos, with a short trip up to Rio Paraíba, to visit a village of the Coroados, Coropós and Purí Indians (7 to 20 October) (Wied-Neuwied

1820a:41-150). Entering the Province of Espírito Santo, they reached Vitória in November. There, SELLOW decided to stay for some time, collecting more specimens, while WIED and FREYREISS proceeded to the north, to Caravelas, leaving Barra do Jucu on 19 December. Both stayed together as far to Morro d'Arara, when Freyreiss decided to return to the Province (Espírito Santo), crossing the Rio Mucuri on 3 February, while the PRINCE went down the Mucuri. Freyreiss joined up with Sellow who stayed in Vitória for some 6 months, occupied with the collection of plants and animals (until June 1816). Near the Rio Mucuri, they again met the PRINCE. Arriving in Salvador, in Bahia, WIED considered that his collections were sufficient, and departed for Europe on 10 May 1817. His travelogue (Wied-Neuwied 1820a, 1821), Reise nach Brasilien in den Jahren 1815 bis 1817, published in two volumes, is one of the best ever written about Brazil (Papavero 1971:59), reporting the flora, fauna and ethnics in a detailed manner for the knowledge of the epoch. His narrative is also of great interest to the

⁵ In Wied-Neuwied (1820b:6): "Two Germans, Messrs. Freyreiss and Sellow, who intended to travel several years in the Brazils, have found a generous patron in His Majesty the King of Portugal; it is scarcely possible for any foreigner to be better qualified than they to penetrate into this country, since they are acquainted with the language and manners, and have also prepared themselves by several years spent in travelling. I made a part of my tour in the company of these gentlemen, and received much interesting information from Mr. Freyreiss, for which I beg leave to take this opportunity of returning him my thanks". Whereas in Wied-Neuwied (1820c:iv): "Two Germans, M. Freyreiss and M. Sellow, who are inclined to remain some years, in Brazil, and, still farther, to explore the country, have in the king of Portugal a generous protector. Persons better qualified for executing the task they have undertaken, could not easily be found, as they are intimately acquainted with the language and manners of the country, and well prepared by several years of previous travels. I had the advantage of their company in part of my excursion, and have to thank M. Freyreiss for much interesting information". And Wied-Neuwied (1820a:40): "Zwey junge Deutsche, die Herren SELLOW und FREYREISS, welche Sprache und Sitte des Landes kannten, hatten sich mit mir zu dem gemeinschaftlichen Zwecke verbunden, die Untersuchungsreise längs der Ostküste nach Caravellas hinauf zu machen".

⁶ Wied-Neuwied (1820a:3-4): "Minas Geraës war durch MAWE und von ESCHWEGE schon bereist, und wenn auch noch nicht erschöpft, dennoch grossentheils bekannt. Ich fand es daher bey meiner Ankunft in Brasilien zweckmässiger, lieber die noch ganz unbekannte oder vielmehr noch nicht beschriebene Ostküste zu wählen. Hier leben mehrere Stämme der Urbewohner noch in ihrer Originalität und unangefochten von den sich überall nach ausbreitenden Europäern. ... Hier in diesen Wäldern, wo dem sonst überall bedrängten Urbewohner ein ruhiger Aufenthalt bis jetzt gesichert war, kann man diese Menschen noch in ihrem ursprünglichen Zustande finden. Wie hätte nicht eine solche Gegend für den Reisenden vor allen andern anziehend seyn sollen, der nicht gesonnen war, viele Jahre in diesen heissen Regionen unserer Erde zu verleben?".

field of Brazilian history (Diggs 2008).

As pointed out by Zepernick (1995:229), WIED is well-known for his ethnological and zoological studies in America, but he was also interested in botany. The rich botanical material collected by the PRINCE and by Sellow and Freyreiss is the best testimony to the many hours they had devoted to gathering plants, allied to WIED's citation and/or description of many species in the Reise. Urban (1893, 1906) reported that Sellow collected c. 1,800 specimens during the itinerary shared with WIED. According to Urban (1906), the original collection of WIED was composed of 650 numbers and was donated (sic) to the most illustrious botanist Karl Friedrich Philipp von Martius. In fact, Martius bought 650 WIED species in 1828 (accession nr. 133 of MARTIUS private herbarium catalogue; Eichler 1869:13), which are currently in Herbarium Martii in Meise (BR), Belgium. Other part of the collection could be found in Herbarium Kunth, currently in Berlin (B), other in Herbarium Schrader, currently in St. Petersburg (LE), Göttingen (GOET), Ghent (GENT), Vienna (W), Herbarium Nees von Esenbeck in Graz (GZU), and other duplicates and/or fragments dispersed in several herbaria, viz. Field Museum of Chicago (F), Florence (FI), Geneva (G), Kew Gardens (K), Lund (LD), Munich (M), National Herbarium of Victoria (MEL), Missouri Botanical Garden (MO), New York Botanical Garden (NY), Paris (P), Stockholm (S), Smithsonian (US), etc. According to Martius (1837), a collection almost complete with about 600 numbers was donated by WIED to his old professor Hofrath SCHRADER of Göttingen. The materials received by MARTIUS, in part were used and described by him and NEES VON ESENBECK, and the great majority was put available to the botanists participants in Flora Brasiliensis. There is also the indication, from the intense correspondence between NEEs and WIED until 1828 (Bosch

Brasilien-Bibliothek, Stuttgart, Mappe 1054, apud Stoverock 2001), that WIED put the precious herbarium of Brazilian plants up for sale in 1824, but in the occasion NEES did not have financial conditions to get it for the Botanical Garden of Bonn (letters of 8 January 1824, 10 April 1824, 17 January 1825, 5 November 1826). According to Kuhn (1991:11). WIED collected about 5,000 specimens of 1,000 species of plants (the number of species indicated by Wied-Neuwied 1817:1520). Regarding the number of species collected, up to the present, from surveying all the volumes by Martius' (1840-1906) Flora Brasiliensis, the publications by Schrader (1821, 1824), Nees von Esenbeck (1821a, 1821b, 1822, 1829, 1833, 1836), Salm-Reifferscheid-Dyck (1821), Nees von Esenbeck & Martius (1823a, 1823b). Martius (1823-1853, 1827, 1833, 1840), Wied-Neuwied (1823, 1824), Wied-Neuwied & Nees von Esenbeck (1827a, 1827b), other contemporary botanists of WIED, the Index Kewensis, the 102 monographs of Flora Neotropica, the International Plant Names Index (IPNI) and the database w3TROPICOS, it has been possible to reconstitute the existence of at least 1,065 gatherings by WIED in Brazil (c. 1,579 specimens), which are explicitly cited in those works and in other opera princeps and recent revisions. In numbers, those collections are distributed in 131 families, 502 genera, 1,015 species of vascular plants (Spermathophyta - Pteridophyta) and 13 families, 17 genera, 24 species of non vascular cryptogams (Bryophytes – Thallophytes) and Algae. Again, this scenario demonstrates the high importance of HERBARIUM WIED, specially because it presents c. 495 nomenclatural types. The number of currently accepted species names might be higher, since many of the gatherings have not been located yet (c. 269) and due to the existence of specimens that are still indeterminate or have not been cited by authors. Additionally, WIED also collected plant samples in

Brazil⁷, 126 of them were donated to the Botanical Garden of Bonn by the privy councillor Johann Wolfgang von Goethe (Barthlott & Rafiqpoor 2006:233). Bory (1819:380)reported that Baron KEVERBERG was in Neuwied (c. 1817) and brought to Ghent seeds collected by WIED in Brazil. Lieutenant Hoffmann had arranged these seeds by numerical order, with vague information for the majority (i.e., without any classification), in a catalogue numbered from 1 to 349. Most of those seeds germinated in the Botanical Garden of Ghent and some also germinated in Antwerp, in the greenhouse of SOMMÉ, where the no. 287 produced the species later named as Passiflora maximiliana by Bory. In England, Mr. PARMENTIER, burgomaster d'Enthien, received directly from WIED a great number of seeds which generally also germinated well and where the same species has received the name of Passiflora discolor (Frison & Aernouts 1975:26).

Following, the toponyms cited by the PRINCE in his book of travels is presented chronologically (after contextualisation by Bokermann 1957; Figs. 1–4). Those distinguished in **boldface** denote localities which have been mentioned in botanical collections, from information on labels of exsiccatae. In *italic*, the original spelling used by WIED:

Rio de Janeiro – 17 Jul. to 4 Aug. 1815 São Cristóvão (S. Christoph) – 4 Aug. Praia Grande (*Praya Grande*) – 5 Aug.

Aldeia (village) de S. Gonçalo (S. Gonzalves, nowadays known as city of S. Gonçalo, said Niterói) – 7 Aug.

Riacho (stream) Guajindiba (*Guajintibo*, appears in maps under the spelling of Guajuritiba and Guajuntiba; discharges in Bay of Guanabara) – 7 Aug.

Serra (mountain range) de Inoã (*Inuá*; farm and railway station, between Niterói and Maricá) –

8 Aug

 Lago (lake) de Maricá [Freguesia (civil parish)
 de Maricá, Villa (village) de Sta. Maria de Marica; current city of Maricá] – 9 Aug.

Fazenda (farm) *Gurapina* (Gururupina, Gururapina, Guarapina; pond in the seaboard of state of Rio de Janeiro nearly before Ponta Negra; probably the current village of Joaquim Mariano) – 11 Aug.

Lagoa (pond) Ponta Negra

Lagoa de Saquarema (Sagoarema; municipality with the same name)

Fazenda do Pitanga (old farm about 10 km far from Saquarema)

Fazenda de Tiririca (old sugar mill)

Fazenda Parati

Lagoa de Araruama (Iraruama or Aruama)

S. Pedro dos Índios (current S. Pedro da Aldeia) Cabo Frio (WIED left on 8 Sept.)

Fazenda de **Campos Novos** or Fazenda do Rei (*Re*; current town of Tamoios) – 8 Sept.

Rio (river) S. João

Vila da Barra de S. João – 8 Sept.

Rio das Ostras – 9 Sept.

Fazenda de **Tapebuçu** (Tapebussu; in the municipality of Casimiro de Abreu) – 9 Sept.

Serra de **Iriri** – 16 Sept.

Rio Macaé (Macahé)

Vila de S. João de **Macahé** (current Macaé) – 17 Sept.

Fazenda de Baretto (Barreto; old farm 10 km far from Macaé) – 18 Sept.

Paulista (Lagoa do Paulista; about 20 km far from Barreto) – 19 Sept.

Curral (Corral) **de Ubatuba** (*Coral de Battuba*; about 30 km far from Paulista) – 20 Sept.

Barra (inlet) do Rio **Furado** (about 30 km far from Ubatuba) – 23 Sept.

Lagoa Feia – 23 Sept.

Rio Bragança (Barganza) – 24 Sept.

Santo Amaro (probably the current population of Santo Amaro de Campos, in the municipality of Campos) – 24 Sept.

planície (plain) dos Goitacás (Goaytacases)

S. Salvador dos **Campos** dos Goitacás – 25 Sept. Abadia (abbey) de **S. Bento** do Rio de Janeiro

near to **Rio Paraíba** (*Paraïba*; with the trip to the Mission of São Fidélis, village of the

⁷ See the notes about Wied's expedition, *Neuere Nachrichten vom Prinzen Maximilian von Neuwied*, in *Morgenblatt für gebildete Stände* 69 (Mittwoch, 20. März 1816):275, and *Naturhistorische Reise in Brasilien des Prinzen Max von Neu – Wied*, in *Isis (Oken)* 7(118):943. 1817: "Am 18. Oktober giengen schon 13 Kisten nach Rio J. ab. In Nro. 1 und 2. 130-40 Vögel, ... 3—7. 250 Vögel, Pflanzen, über 100 Arten Samen, ... 8. Pflanzen und Samen. ...".



Figure 1: Map of Brazil showing the localities visited by PRINCE MAXIMILIAN, marked by black circles.

Coroados Indians, current city of S. Fidélis) – 7 Oct.

Morro (hill) do Gambá

Morro do Sapateiro (Sapateira)

Fazenda do Colégio (Collegio)

Rio do Colégio

Aldeia (Aldea) da Pedra

Rio Muriaé (Muriähé)

Serra do Pico

Aldeia de S. Antonio

S. Salvador dos Campos dos Goitacás - 20 Nov.

S. João da Barra - 21-23 Nov.

Fazenda Mandinga - 24 Nov.

Fazenda de **Muribeca** (Moribeca; *Muribecca*; probably the current population of Batalha) – 26 Nov.

Rio Gutinguti

Rio Muribeca

Rio Itabapuana (Comapuam, Campapoana, Itabapoana, Itapuana; borderline between the states of Rio de Janeiro and Espírito Santo) – 26 Nov.

Barra do Rio Itabapuana (probably the village of same name, already in Espírito Santo)

(State of Espírito Santo) Quartel (Quarter) or Destacamento (Detachment) das Barreiras

Povoado (population) de Siri (Çiri)

Lagoa de Siri

Itapemirim

Rio Itapemirim

Serra de Itapemirim

Minas (mines) de Castelo (Castello)

Morro de Agá

Povoado Piúma or Ipiúma (current Piúma)

Riacho (stream) Iriri

Rio Iritiba (*Reritigba*, Reritiba, or Benevente)

Vila Nova de Benevente (current Anchieta)

Rio Guaraparim (Goaraparim)

Povoado de Obu

Povoado de Miaipé (*Miaïpé*, Meahype, Meaipe)

Fazenda de Campos

Engenho Velho

Vila de Guaraparim (*Goaraparim*; current Guarapari)

Rio Perro Cão (Câo)

Ponta da Fruta

Vila do Espírito-Santo

Rio Espírito Santo or **Jucu** (Bay of Vitória)

Vila Velha do Espírito Santo

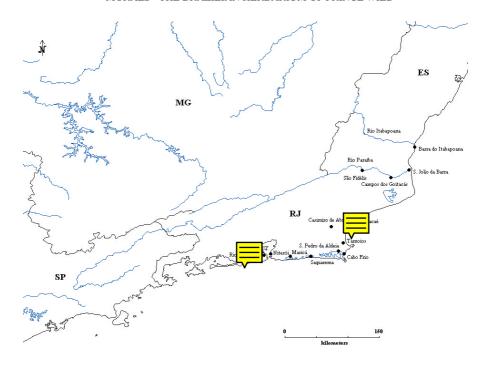


Figure 2: Map of State of Rio de Janeiro with indication of some of the places visited by PRINCE MAXIMILIAN. State names abbreviated: ES – Espírito Santo, MG – Minas Gerais, RJ – Rio de Janeiro, SP – São Paulo. Rivers and lakes in blue.

Nossa Senhora da Vitória

Barra de Jucu (Jucú)

Rio Jucu

Fazendas de **Coroaba** and de **Araçatiba** (Arassatiba; probably the current city of Araçatiba)

Morro de Aracatiba

S. Agostinho (Augustinho)

Pedra d'Água (Pedra d'Agoa) – 19 Dec.

Rochedo (boulder) de Jucutucoara

Fazenda Rumão (Rumão) - 19 Dec.

Ilha (island) das Pombas – 19 Dec.

Rio Jucutucoara – 20 Dec.

Rio Muruim (Murui) or Passagem – 20 Dec.

Povoado de **Praia Mole** (*Praya Molle*) – 20 Dec.

Povoado de Carapebuçu (Carapebu) – 21 Dec.

Vila Nova de Almeida (current Nova Almeida) –

Rio Saí-anha (*Saiianha* = Saianha, Sianha) or dos

Reis (Reys) Magos

Rio Piraquê-açu (Pyrakäassú)

Aldeia Velha (current Aracruz, ex Santa Cruz)

Quartel do Riacho

Quartel dos Comboios (Comboyos)

Quartel da Regência (Barra do Rio Doce; current city of Regência)

Rio Doce (*Doçe*) – 26 Dec. (Fig. 5)

Ilha Carapuça (about 15 km far from Regência) – 26 Dec.

Ilha Comprida – 26 Dec.

Ilha de Gambuim (Gambin, Gambim) – 26 Dec.

Ilha do Boi – 27 Dec.

Ilha do Bom Jesus – 27 Dec.

Linhares – 27 Dec.

Fazenda de Bom Jardim (Bomjardim) - 27 Dec.

Linhares - 29 Dec.

Regência (Regençia) – 30 Dec.

Quartel de Monsarás (Monsarras, *Monserra*) or de Juparanã da Praia (*Juparanán da Praya*) – 30 Dec.

Lagoa de Juparanã da Praia – 30 Dec.

Lagoa Piranga (Ipiranga) – 31 Dec.

Rio Barra Seca - 1 Jan. 1816

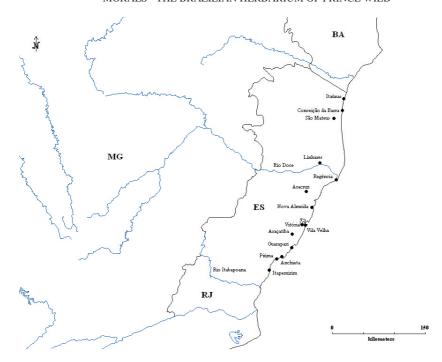


Figure 3: Map of State of Espírito Santo with indication of some of the places visited by PRINCE MAXIMILIAN. State names abbreviated: BA - Bahia, ES - Espírito Santo, MG - Minas Gerais, RJ - Rio de Janeiro. Rivers and lakes in blue.

Rio São Mateus (*S. Matthæus*, Matheos) – 2 Jan. **Barra de S. Mateus** (current Conceição da Barra)

Rio Guajuntiba (Guajintiba)

Fazenda das Itaúnas (As Itaünas; current Itaúnas)

Riacho Doce (Doçe)

(State of Bahia) Rio das Ostras

Os Lençóis (Os Lenzôes)

Ribeirão (brook) Barra Nova

Rio Mucuri

Vila de S. José de **Porto Alegre** (*Port'Allegre*, termed **Mucuri**)

Rio Peruípe

Vila **Viçosa** (*Viçoza*, former Marobá, current Nova Vicosa)

Caravellas (Caravellas)

Fazenda Pindoba

Rio Alcobaca (Taniän, Itaniän, Itanhem, Itanhaém)

Fazenda Ponte do Gentio

Fazenda Pindoba

Caravelas

Viçosa

Rio Mucuri

S. José de Porto Alegre

Fazenda do **Morro d'Arara** – 5 Feb.

Lagoa d'Arara

Viçosa

Caravelas – 12 Apr.

(trip from Caravelas to Rio Grande de Belmonte:

WIED left to the North on 23 Jul.)

Barra do Rio Barra Velha - 23 Jul.

Rio Alcobaça – 24 Jul.

Alcobaça – 24 Jul.

Barra de Barra Velha – 25 Jul.

Rio do Prado or Surucucu (Jurucucu) – 25 Jul.

Vila do Prado (current Prado; WIED went up river Prado on 30 Jul., to visit some villages of indians Patachós, without indicating the

Ponta de **Comechatiba** (*Comechatibá*, *Currubichatibá*, Cumuruchatiba)

Rio do Frade

Fazenda de Caledônia

Imbassuaba

Riacho Caí (Cahy)

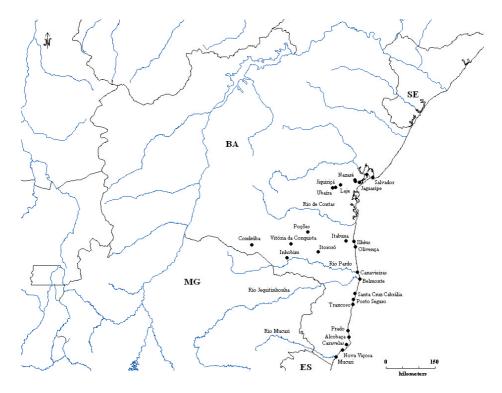


Figure 4: Map of State of Bahia with indication of some of the places visited by PRINCE MAXIMILIAN. State names abbreviated: BA-Bahia, $ES-Esp\'{i}$ rito Santo, MG-Minas Gerais, SE-Sergipe. Rivers in blue.

Rio Corumbau (Corumbao)

Rio Cramimoã (Cramemoan)

Cramemoan (Cramimuan) or Quartel da Cunha Jauacema (*Jaüassema*) or Juacema (*Juassema*)

Rio do Frade

Rio de Trancoso (Trancozo, Itapitanga)

Trancoso

Rio da Barra

Rio do Porto Seguro (Buranhem, Buraniem, Buranhaém, Rio da Cachoeira)

Porto Seguro

Riacho Patatiba

Rio do Mangue (das Mangues)

Barra do Rio Mutari

Rio Santa Cruz

Vila de Santa Cruz (*Freguesia de Nossa Senhora da Bella Cruz*, current Santa Cruz Cabrália)

Povoado de Santo André

Rio Mogiquiçaba (Misquiçaba)

Rio Santo Antônio

Barra de Guaiú (Guayú, Guaju)

Rio Barra Velha

Vila de Belmonte (current Belmonte)

Rio Belmonte

Rio Grande de Belmonte (Rio Jequitinhonha, Rio Grande)

(stay in Rio Grande de Belmonte and with the indians Botocudos)

Fazenda de Ipibura (Ibipura) – 17 Aug.

Rio Obu (*Bocca do Obu*, *Ilha da Bocca d'Obú*) – 18 Aug.

Coroa (*Corroa*) de Piranga (beach of Rio Belmonte) – 18 Aug.

Rio da Salsa (*Salza*) or Peruaçu (Peruassu) – 19 Aug.

Coroa da Palha - 19 Aug.

Riacho da Palha - 19 Aug.

Coroa de Timicuí – 19 Aug.



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Figure 5: Drawing made by WIED in December 1815 showing a scene in Rio Doce. In the boat, WIED portrayed himself with SELLOW and FREYREISS. Some individual plants and others in clusters are indicated. Biblioteca Brasiliana da Robert Bosch GmbH. Catálogo. Vol. 2. O legado do Príncipe Maximiliano de Wied-Neuwied / 1a. Parte: Ilustrações da viagem ao Brasil de 1815 a 1817. Petrópolis: Kapa Editorial, 2001.

Timicuí

Ilha Grande – 21 Aug.

Coroa das Barreiras (As Barreiras) – 21 Aug.

Serra dos Guaribas

Ilha da Cachoeirinha – 22 Aug.

Corredeira Cachoeirinha

Cachoerinha (current city)

Praia Araçazeiro (Raçaseiro)

Lapa dos Mineiros

Ouartel do Salto

Quartel dos Arcos

Ilha da Chave

Belmonte – 28 Sept.

Rio Corumbau (Corumbao)

Riacho Caí (Cahy)

Caravelas

Mucuri

Rio do Prado

Destacamento de Vimieiro (Vimieyro)

Vila do Prado

Comexatiba (Comechatibá)

Fazenda de Caledônia

Rio Corumbao

Belmonte - 28 Nov.

Serra de João de Leão

Serra de Santo André

Barra do Rio das Farinhas (Barra Velha)

Rio Pardo

Rio Imbuca

Canavieiras

Rio da Salsa

Barra do Patipe

Barra do Rio Poxi (Poxim)

Rio Comandatuba

Rio Una

Rio de Muruim (Maruim)

Rio da Cachoeira

Riacho Aracari (Arasari)

Riacho Meço

Riacho Oaqui (Oaki)

Vila Nova de Olivença (current Olivença,

formerly also Vila Nova)

MORAES - THE BRAZILIAN HERBARIUM OF PRINCE WIED

Riacho Cururupe or Cururupe

Rio Ilhéus (or S. Jorge, Cachoeira, and Itabuna)

Vila dos Ilhéus or de S. Jorge (current Ilhéus)

Rio do Fundão (Fundão)

Rio da Cachoeira

Rio Itaípe (Itahype, Taïpe)

Almada (current Castelo Novo)

Ilhéus

(trip from Ilhéus to São Pedro de Alcântara, the last village up river. – Arrangements for the expedition toward "sertão" (hinterland) via the forests)

Fazenda Simão (Simam) - 21 Dec.

Curral (Coral) do Jacarandá – 24 Dec.

Ribeirão dos Quiricos - 25 Dec.

Vila de S. Pedro de Alcântara (As Ferradas, current Itabuna) – 26 Dec.

Ilhéus

São Pedro de Alcântara

(journey via the forest of S. Pedro de Alcântara to Barra da Vareda, in the hinterland. WIED used the road done by **Capitam Filisberto Gomes da Silva**, or **Via Felisbertia**, *Minas-Strasse*, *Waldstrasse*)

Rancho (ranch) do Veado - 6 Jan. 1817

Riacho Estreito d'Água (d'Agoa) - 6 Jan.

Sertão do Rio Salgado - 7 Jan.

Sequeiro Grande

Riacho Joaquim dos Santos – 8 Jan.

Córrego (stream) Piabanha – 9 Jan.

Porto (port) da Canoa

Ribeirão da Issara - 9 Jan.

Serra da Sussuarana (Çuçuaranna) – 10 Jan.

Córrego (rivulet) João de Deus - 10 Jan.

Ribeirão da Cajazeira (Cajaseira) - 11 Jan.

Ribeirão das Minhocas - 11 Jan.

Rio Ilhéus (crossed likely near the current city of Itororó, about 100 km far from Itabuna) – 11 Jan.

Vale (valley) do Rio Boqueirão (*Buqueirâo*) – 18

Córrego Dois (Duos) Riachos - 18 Jan.

Rio Catolé – 19 Jan.

Córrego Boqueirão - 26 Jan.

Rio Berruga (Beruga) – 27 Jan.

Berruga

Rio Jibóia (Jiboya) - 29 Jan.

Córrego do Mundo Novo - 30 Jan.

Fazenda do Capitão Ferreira Campos – 30 Jan. Barra da Vareda (current Inhobim) – 30 Jan.

Angicos (Anjicos) – 5 Feb.

Fazenda da Vareda - 6 Feb.

Fazenda de Tamburil (Tambouril; probably in

the municipality of Condeúba) – 8 Feb.

Riacho da Ressaca (Ressaque) – 8 Feb.

Fazenda Ressaca – 9 Feb.

Ilha

Fazenda da Ilha (Ilha de Dentro) – 10 Feb.

Quartel Geral do Valo (Valo Fundo)

Riacho da Ressaca

Fazenda da Vareda

Os Porcos - 6 Mar.

Arraial (*Arrayal*; hamlet) **da Conquista** (Vitória da Conquista) – 8 Mar.

Serra do Mundo Novo

Arraial Jibóia (*Jiboya*)

Fazenda da Preguiça (Priguiça)

Fazenda Taquara

Arraial de Poções (*Os Possões*, later Djalma Dutra, current Poções)

Fazenda de Uruba

Fazenda da Ladeira

Fazenda da Cachoeira (Caxoeira)

vale do Rio das Contas

prado (meadow) Cabeça do Boi

Fazenda Sta. Inês (S. Agnés)

Rio Jiquiriçá

Fazenda da Areia (former city of Areia, current Ubaíra)

Povoado de Jiquiriçá (current Jiquiriçá)

Riacho de Bom Jesus

Povoado Corta Mão

Arraial de Laje (current Laje)

Povoado de Aldeia (*Aldéa*, current Aratuípe)

Nazaré (Nazareth, das Farinhas)

Rio Jaguaribe (Jagoaripe)

Vila de Jaguaripe (current Jaguaripe)

Ilha de Itaparica (Taparica)

S. Salvador (Çidade, Bahia, Çidade de S. Salvador da Bahia de Todos os Santos, current Salvador)

(WIED stayed in Salvador until 10 May, when he departed to Europe onto the ship Princesa Carlota, arriving in Lisbon on 1st July)

The great number of toponyms that does not present gatherings, from the specimens surveyed so far (from literature and data banks of herbaria), could be explained by the following reasons: 1) many of them were cited in the narrative of Wied's voyage, only as reference to places where he had passed, without having necessarily a prolonged stop and/or material collected actually; 2) several authors that treated the

species collected by WIED did not trouble to cite the information on labels, what was a common procedure at that time; 3) many of the surveyed species still have incomplete information, and are in need of having their specimens analysed and their labels transcribed; 4) many specimens already accessed in different herbaria have no information of locality on label; and 5) there are still many specimens that have not been traced to the herbaria known to house WIED's collections.

The enumeration of these localities visited by WIED, according to his narrative. not only attests the wide range of his journey, but also the inestimable value of his botanical collections for the knowledge of the Brazilian flora. As pointed out by Pacheco (2004), WIED decided to investigate the hinterlands (sertões), when he was in the so Vila de Ilhéus, in the coast of Bahia, On 21 December 1816 he initiated his trip to São Pedro de Alcântara, and made the arrangements for the trip to the interior through the forests. From São Pedro de Alcântara to Barra da Vareda, in the hinterland, his trip took about 1 month (26 December to 30 January 1817), staying and exploring that region for about more 11 days (30 January to 10 February), when he began the trip from the boundary of Minas Gerais to Arraial da Conquista. In those itineraries, WIED had the possibility of collecting in the "Caatingas" and in "Campos Gerais" ("Cerrados"; savannas), but most of his activity was developed in the forests. He also had the possibility to find, in the plateau region of Vitória da Conquista, an area of ecological tension, where elements of Cerrado, Caatinga and Mata Atlântica were alternated in mosaics of vegetation. He continued towards Salvador, crossing stretches of innermost Atlantic forest (semidecidual forest), and some parts of transition of this bioma with Caatinga. From this, there is a sampling of three of the major Brazilian biomes.

Still corroborating the importance WIED had for the botany of his time, and in relation to the species hailed from his voyage to Brazil, many names were coined in homage to him, starting by the genus Neowedia (Acanthaceae), of which SCHRADER described two species in 1821, Neowedia speciosa Schrad. (Dipteracanthus neowedia (Schrad.) Nees Ruellia neovedia (Nees) Lindau). and N. Schrad. (affinis Dipteracanthus affinis (Schrad.) Nees Ruellia affinis (Nees) Lindau). In 1833, Blume described the genus of orchids Neuwiedia, also in honour to the PRINCE, however from Asiatic species (Kremer 1995). To know, amongst others, the following species that occur in Brazil have been nominated in his honour:

Abutilon neovidense K.Schum.

Alsodeia maximilianii Eichl. (Rinorea maximilianii (Eichl.) Kuntze)

Amaryllis principis Salm-Dyck

Artanthe maximilianii Miq.

Asplundia maximilianii Harling

Atimeta videniana Schott (= Rhodospatha oblongata Poepp. & Endl.)

Bauhinia maximilianii Benth. (Bauhinia smilacina (Schott) Steud. var. maximilianii (Benth.)
Wunderlin Binaria maximilianii (Benth.)
A.Schmitz)

Calathea neoviedii Petersen (Phyllodes neoviedii (Petersen) Kuntze)

Casearia maximilianii Eichl.

Chamissoa maximilianii Mart. ex Moq.

Chromolaena maximilianii (Schrad. ex DC.) R.M.King & H.Rob. (Eupatorium maximilianii Schrad. ex DC. Osmia maximilianii (Schrad. ex DC.) Sch.Bip.)

Convolvulus maximilianii Nees

Cordia neowidiana A.DC. (Varronia neowidiana (A.DC.) Borhidi)

Croton grandivelum Baill. var. neuwiedii (Baill.) Müll.Arg. (Croton agrarius Baill. var. neuwiedii Baill.)

Croton neuwiedii Müll.Arg. (Oxydectes neuwiedii (Müll.Arg.) Kuntze)

Cryptocarya wiedensis P.L.R.Moraes

Cyperus maximilianii Schrad. ex Nees (Pycreus maximilianii Nees Cyperus olfersianus Kunth var. maximilianii (Nees) Boeck.)

MORAES - THE BRAZILIAN HERBARIUM OF PRINCE WIED

Diclidium maximilianii Schrad. ex Nees (Cyperus ferax Rich. var. maximilianii (Schrad. ex Nees) Boeck.)

Echites maximilianea Stadelm. (= Temnadenia violacea (Vell.) Miers)

Eriocaulon maximilianii Schrad. (non Eriocaulon maximilianii Bong., non Eriocaulon maximilianii Mart.; Paepalanthus maximilianii (Schrad.) Kunth)

Eugenia maximiliana DC. (Myrciaria maximiliana (DC.) O.Berg)

Eugenia maximiliana O.Berg

Evolvulus maximilianii Mart. ex Choisy

Faramea vidensis Müll.Arg.

Gaylussacia brasiliensis Meisn. var. maximilianii Meisn.

Hancornia speciosa Gomes var. maximilianii A.DC.

Hiraea wiedeana A.Juss. (Hiraea ternifolia (Kunth) A.Juss. var. wiedeana Nied.)

Heteropterys wiedeana A.Juss. (Heteropterys leschenaultiana A.Juss. var. wiedeana (A.Juss.) Griseb. in Mart.)

Ionidium maximilianii Eichl. [Calceolaria maximilianii (Eichl.) Kuntze Hybanthus maximilianii (Eichl.) Hassl.)

Ipomoea maximilianii Meisn. (Merremia dissecta (Jacq.) Hallier f. var. maximilianii (Meisn.) Lorentz Merremia dissecta (Jacq.) Hallier f. var. maximilianii (Meisn.) Hallier f.)

Jacquemontia maximilianii Peter ex Hallier (nom. nud.)

Lagochilium maximilianum Nees (Aphelandra maximiliana (Nees) Benth.)

Lantana maximilianii Schauer (Camara maximilianii (Schauer) Kuntze Lippia maximilianii (Schauer) T.R.S.Silva)

Ligeria maximiliana Hanst. (Sinningia maximiliana (Hanst.) Benth. & Hook. ex Fritsch)

Maxillaria neowiedii Rchb. f. [Christensonella neowiedii (Rchb. f.) S.Koehler)

Miconia maximilianea DC.

Monstera maximilianii Engl.

Myrcia maximiliana O.Berg

Oreodaphne maximilianea Nees & Mart. (Mespilodaphne maximilianea (Nees & Mart.) Meisn. Ocotea maximilianea (Nees & Mart.) P.L.R.Moraes)

Oxalis neuwiedii Zucc. (Acetosella neuwiedii (Zucc.) Kuntze)

Paepalanthus maximilianii Kunth

Panicum maximilianii Schrad. in Schult.

Parabignonia maximilianii (Mart. ex DC.) Bureau ex K.Schum. (Tecoma maximilianii Mart. ex DC. Gelseminum maximilianii (Mart. ex DC.)

Kuntze *Dolichandra maximilianii* (Mart. ex DC.) Kuntze)

Passiflora maximiliana Boiry

Pilea maximilianii Miq.

Rubachia neuwiediana O.Berg (Marlieria neuwiediana (O.Berg) Nied.)

Rudgea neuwiedii Müll.Arg. (Uragoga neuwiedii (Müll.Arg.) Kuntze]

Salvia neovidensis Benth.

Schaueria maximilianii Nees

Stachytarpheta maximilianii Schauer

Tassadia neovidensis E.Fourn.

Tibouchina maximiliana (DC.) Baill. (Lasiandra maximiliana DC.)

Urostigma maximilianum Miq. (Ficus maximiliana (Miq.) Mart. ex Miq.)

According to Martius (1837:34), WIED had the collaboration of Hofrath Heinrich Adolf Schrader in Göttingen, Karl Theodor Mencke (Menke⁸) in Pyrmont, Hofkammerrath Wilhelm Klenze (Klaenze) in Laubach, and Christian Gottfried Daniel Nees von Esenbeck in Bonn, for the curation of his herbarium. Although Wied had not numbered most of his gatherings, it is common to find many of them with numbers given by Menke, Klenze, Nees, and Schrader, which are not necessarily related to Wied's own numeration.

The private herbarium of PRINCE MAXIMILIAN OF WIED, from his botanical collection gathered in Brazil in 1815 to 1817, comprehends 125 specimens of plants encompassing 98 species distributed in 36 families of Angiosperms (and two still indeterminate), and three families of Pteridophyta. Additionally, there are five specimens of Algae, and one of Lichen. For the Angiosperms, only four specimens have no number given by WIED. Excepting for *Aristolochia trilobata* L., all the other

⁸ See *Isis (Oken)* 7 (119):948-952. 1817, Schreiben des Prinzen Max von Neuwied an Dr. K. Th. Menke in Pyrmont.

specimens had no identification at the species level, with few having the indication of possible genera and/or families. Thus, the numbers showed above indicate that several species are represented by more than one specimen in the collection.

THE PRIVATE BRAZILIAN HERBARIUM BY MAXIMILIAN, PRINCE OF WIED

The numbers indicated after "Herbarium Wied" in square brackets are those written by WIED usually in ink on labels of each specimen, later when he was in Germany, thus they do not represent a collector number. Those in parentheses were annotated by Dr. Krüger on the folders of each specimen. Herbarium abbreviations follow Holmgren & Holmgren (1998).

ACANTHACEAE

Beloperone plumbaginifolia (J.Jacq.) Nees, Fl. Bras. 9: 139. 1847.

Specimens: Brazil. Rio de Janeiro: Cabo Frio, Aug-Sep 1815, fl., *Wied s.n.* (GOET!); Brazil. Without locality: s.d., Herbarium Wied [65] (33).

Dipteracanthus schauerianus Nees, Ind. Sem. Hort. Vratisl. 1838, Linnaea 16: 290. 1842. Ruellia schaueriana (Nees) Voss, in Vilm. Blumengärtn. (ed. 3) 1: 813. 1894 (as "Ruellea"). Ruellia schaueriana (Nees) Lindau in Engl. & Prantl, Nat. Pflanzenfam. 4(3b): 310. 1895, homon. poster.

[= *Ruellia* aff. *solitaria* Vell., Fl. Flum. 266. 1829, Fl. Flum. Icon. 6: t. 95. 1831]. Specimen: Herbarium Wied [85] (35).

Leptostachya heterophylla Nees, Fl. Bras. 9: 150. 1847; idem in Prodr. (DC.) 11: 377. 1847. Dianthera heterophylla (Nees) Benth. & Hook.f., Gen. 2(2): 1114. 1876, nom. illegit. Justicia heterophylla (Nees) Lindau in Engl. & Prantl, Nat. Pflanzenfam. 4(3b): 350. 1895, nom. illegit., non Schltdl. & Cham. 1830. Pupilla heterophylla (Nees) Rizzini, Arch. Jard. Bot. Rio de Janeiro 9:

57. 1949. *Justicia parahyba* P.L.R.Moraes, Neodiversity 4(1): 5. 2009.

Specimens: Brazil. Rio de Janeiro: Cabo Frio, Aug-Sep 1815, fl., *Wied s.n.* (Menke nr. 25) (BR 6583583 !, BR !); Brazil. Without locality: s.d., Herbarium Wied [88] (16).

Schaueria lophura Nees & Mart., Fl. Bras. 9: 104. 1847. Protologue: "in sylvis ad Porto Seguro et Cabo Frio, Augusto et Septembri in anthesi: Maximilianus Princ. Vidensis; in prov. Minarum: Gardner (n. Dryas". Syntypes: Brazil. Rio de Janeiro: Cabo Frio, s.d., fl., anonymous s.n. (label annotated by Nees von Esenbeck) (GZU 000251420 !); idem, Aug 1815, fl., Wied s.n. (BR 8096937!, BR 8058744!, BR 8098948! - Klaenze nr. 105); idem, Aug 1815, fl., Wied s.n. (Klaenze nr. 106) (GOET! - 2 sheets); Brazil. Bahia: Porto Seguro, Jul 1816, fl., Wied s.n. (BR 6951733 !); Brazil. Without locality: s.d., Herbarium Wied [122] (47).

= ? *Schaueria virginea* Nees, Fl. Bras. 9: 105. 1847. Protologue: "In sylvis prov. Sebastianopolitanae, Septembri: Maxim. Princ. Vidensis; ad Araçatiba: Sellow". Syntypes: Brazil. Rio de Janeiro: Cabo Frio, 1815, fl., fr., *Wied s.n.* (BR 8096975!, BR 8096968! – fr., GZU 000251416!); Brazil. Rio de Janeiro: loco non indicato, *Sellow L70 B304* (B – F neg. 8778!).

Stenandrium mandioccanum Nees, Fl. Bras. 9: 76. 1847. Syntypes: Brazil. Rio de Janeiro: Cabo Frio, Aug-Sep 1815, fl., Wied s.n. (GZU 000250374!, Herbarium Wied [124] (61)).

AMARANTHACEAE

Pfaffia sp.

Specimen: Herbarium Wied [130] (105).

ANACARDIACEAE

Lithraea brasiliensis Marchand, Rev. Anacard, 183, 1869.

Specimens: Brazil. Rio de Janeiro: Cabo Frio, 1815, *Wied s.n.* (BR 6586348 !); Brazil. Without locality: s.d., Herbarium Wied [113] (72), Herbarium Wied [139] (71).

AQUIFOLIACEAE

cf. *Ilex* sp.

Specimen: Herbarium Wied [116] (90).

ARISTOLOCHIACEAE

Aristolochia trilobata L., Sp. Pl. 2: 960. 1753.

Specimens: Brazil. Rio de Janeiro: Cabo Frio, 1815, *Wied s.n.* (MEL 244320 !); Brazil. Without locality, s.d., Herbarium Wied [36] (& [38]) (21).

Label handwritten by WIED: "A. foliis trilobis, caule volubili, corollis cylindraceis infractis basi saccatis labio cordato cuspidato, cuspide filiforme corolla triplo longiore torto."; "Flores maximi, ventricosi. Folia palmato-triloba. Caulis aromaticus. Contra ictus serpentum. Barrer."

Note: Refers to Barrère, Hist. Nat. de la Fr. Équinox. 16. 1741.

ASCLEPIADACEAE

Asclepias curassavica L., Sp. Pl. 1: 215. 1753.

Specimen: Herbarium Wied [84] (18).

Oxypetalum banksii R.Br. ex Schult., Syst. Veg. (ed. 15) 6: 91. 1820.

Specimens: Brazil. Rio de Janeiro: Cabo Frio, 1815, *Wied s.n.* (BR 6587277 !); Brazil. Without locality: s.d., Herbarium Wied [41] (23).

ASPLENIACEAE

Scolopendrium plantagineum Schrad., Gött. Gel. Anz. 1824(2): 870. 1824. Phyllitis plantaginea (Schrad.) Kuntze, Revis. Gen. Pl. 2: 818. 1891. Type: Brazil. Rio de Janeiro: Cabo Frio, Aug 1815, Wied 18 (isotypes: B 20 0143720!, B 20 0143728 b!, BR 6971281!, GOET 000766!, GOET 000767!, Herbarium Wied [12]).

[= *Asplenium douglasii* Hook. & Grev., Ic. Fil. t. 150. 1829].

ASTERACEAE

Baccharis genistelloides (Lam.) Pers. subsp. crispa (Spreng.) Joch.Müll., Syst. Bot. Monogr. 76: 198, 2006.

Specimens: Brazil. Bahia: Belmonte, Aug 1816, *Wied s.n.* (BR 6586942 !); Brazil. Without locality: s.d., Herbarium Wied [134] (107).

cf. Baccharis sp.

Specimen: Herbarium Wied [21] (109).

Chromolaena maximilianii (Schrad. ex DC.) R.M.King & H.Rob., Phytologia 49(1): 4. 1981. Eupatorium maximilianii Schrad. ex DC., Prodr. 5: 143. 1836. Protologue: "in Brazilia circa Rio-Janeiro inter sepes primus detexit Princ. Maxim. Neovidensis", "(v. s. comm. à cl. Schrad. ex hort. Goett. et sp. à cl. Lund.)". Syntypes: "Ex Hort. Göttingen", 1832, fl., Schrader s.n. (G-DC !); Brazil. Rio de Janeiro: Apr 1834, fl., Lund 84 (G-DC !). Specimen: Herbarium Wied [127] (106) (Type ?).

cf. *Critonia* sp. vel *Austrocritonia* sp. Specimen: Herbarium Wied [4] (108).

Lepidaploa canescens (Kunth) H.Rob., Proc. Biol. Soc. Wash. 103(2): 483. 1990. Vernonia canescens Kunth, Nov. Gen. Sp. (folio ed.) 4: 27. 1818. Cacalia canescens (Kunth) Kuntze, Revis. Gen. Pl. 2: 969. 1891 = Vernonia geminata Less., Linnaea 4: 303. 1829, homon. post. Cacalia geminata (Less.) Kuntze, Revis. Gen. Pl. 2: 970. 1891.

Specimens: Brazil. Rio de Janeiro: Jul 1815, *Wied s.n.* (BR 6587338 !); Brazil. Bahia: "prope R. Belmonte", Aug 1816, *Wied s.n.* (BR 6587000 !); Brazil. Without locality: s.d., Herbarium Wied [60] (59).

Trichogonia salviaefolia Gardner, London J. Bot. 5: 460. 1846.

Specimens: Brazil. Bahia: "Rio Belmonte", 1816, *Wied s.n.* (not located); Brazil. Without locality: s.d., Herbarium Wied [32] (56).

cf. Trixis sp.

Specimen: Herbarium Wied [44] (57).

BIGNONIACEAE

Adenocalymma flavum Mart. ex DC., Prodr. 9: 202. 1845 = Adenocalymma flavidum Miers, Ann. Mag. Nat. Hist., ser. 3, 7: 389. 1861. Protologue: "in Brazilia ad viam Felisberti.", "(v. s. in h. Mart.)". Holotype: Brazil. Bahia: "in via Felisbertia, Ilheos, 1816"9, fl., Wied s.n. (Schrader nr. X) (BR 8803696!, isotypes: BR 8803856!, BR 8803528!, GOET! (2 sheets: Schrader nrs. X, XI), Herbarium Wied [10] (123)).

Adenocalymma impressum (Rusby) Sandwith, Recueil Trav. Bot. Néerl. 34: 212. 1937. Specimen: Herbarium Wied [73] (122).

Amphilophium scabriusculum (Mart. ex DC.) L.G.Lohmann, Ann. Missouri Bot. Gard. 2009, in press. Pithecoctenium scabriusculum Mart. ex DC., Prodr. 9: 197. 1845. Distictis scabriuscula (Mart. ex DC.) A.H.Gentry, Ann. Missouri Bot. Gard. 61(2): 499. 1974. Holotype: Brazil. Rio de Janeiro: "ad fluv. Paraiba", Sep-Oct 1815, fl., Wied s.n. (BR 8024237!, isotype: Herbarium Wied [63] (121)).

Pyrostegia venusta (Ker Gawl.) Miers, Proc. Roy. Hort. Soc. London 3: 188. 1863. Specimens: Brazil. Bahia: "Rio Grande de Belmonte", 1816, Wied s.n. (Schrader Bign. Nr. VI) (GOET !); idem, Rio de Janeiro: "prope capitalem", 1815, Wied s.n. (BR 6586928!, BR 6586591!); Brazil. Without locality: s.d., Herbarium Wied [135] (28).

Tabebuia chrysotricha (Mart. ex DC.) Standl., Field Mus. Nat. Hist., Bot. Ser., 11(5): 176. 1936.

= Tecoma obtusata DC., Prodr. 9: 217. 1845. Tecoma chrysotricha var. obtusata (DC.) Bureau & K. Schum. ex Mart., Fl. Bras. 8(2): 338. 1897. Tabebuia chrysotricha var. obtusata (DC.) Toledo, Arq. Bot. Estado São Paulo 3(1): 36. 1952. Handroanthus chrysotrichus var. obtusatus (DC.) Mattos, Loefgrenia 50: 2. 1970. Protologue: "In Brazilia legit cl. princ. Vidensis. T. ochracea Mart.! herb. non Cham.". Syntypes: Brazil. Without locality: s.d., fl., fr., Wied s.n. (Nr. XIX - Nees von Esenbeck) (BR 8762283 ! sub T. ochracea, BR 8762610 !, BR 8766373 !, Herbarium Wied [22] (116), Herbarium Wied [52] (117), Herbarium Wied [133] (118), MO 3760992!); Brazil. "Prov. Espiritu Sancto, locis campestribus", 1817, von Martius s.n. (M 0088981! - photos F neg. 20480, K neg. 5951, sub T. ochracea).

Species sp.

Specimen: Herbarium Wied [34] (119) (sterile specimen).

⁹ It is the road opened by Tenente-Coronel Filisberto Gomes da Silva, relative of Marechal Felisberto Caldeira who had ordered and paid for this enterprise two years before the travel of Wied, which linked the harbour of Ilhéus to the border with Minas Gerais, to the East of village of Rio Pardo (Spix & Martius 1828). According to Wied-Neuwied (1821:99-100), the opening of this road through the forests was very expensive and intended to connect the inland territories of the Provinces of Minas Gerais and Bahia to the sea ports, in order to transport their products to the latters and to receive from them the commodities they needed. Some cattle traders came, indeed, from the "sertão" to Ilhéus with their herd of cattle, but they did not find purchasers, neither how to embark the animals to Salvador, which obliged them to sell the cattle to a lowermost price. The failure of such enterprise dissuaded cattle traders to make other attempts, and the road was soon abandoned and closed by the forest. Wied-Neuwied (1821:123-160) left "S. Pedro d'Alcantara" (Itabuna) on 6 January 1817 for "Barra da Vareda" (Inhobim), where he arrived on 30 January 1817, through the road of Captain Filisberto.

BORAGINACEAE

Cordia polycephala (Lam.) I.M.Johnst., J. Arnold Arb. 16: 33. 1935. Varronia polycephala Lam., Tabl. Encycl. 1: 418. 1791.

Specimen: Herbarium Wied [14] (53).

Cordia trichotoma (Vell.) Arrab. ex Steud., Nomencl. Bot. (ed. 2) 1: 419. 1840. Specimen: Herbarium Wied [136] (120).

CONVOLVULACEAE

Jacquemontia heterantha (Nees & Mart.) Hallier f., Bot. Jahrb. 16: 543. 1893. Dufourea heterantha Nees & Mart., Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur. 11: 79. 1823. Aniseia heterantha (Nees & Mart.) Choisy in DC., Prodr. 9: 430. 1845. Holotype: Brazil. Bahia: "Barra da Vareda" [Inhobim], Feb 1817, Wied s.n. (BR 6586249!, isotype: G!).

Other specimens: Brazil. Rio de Janeiro: Cabo Frio, 1815, *Wied s.n.* (BR 6587260!, BR 6586935!); Brazil. Without locality: s.d., Herbarium Wied [42] (44) (Possible isotype).

ERICACEAE

Agarista revoluta (Spreng.) Hook. f. ex Nied. var. revoluta, Fl. Neotr. 66: 313. 1995. = Andromeda ambigua Schrad., Gött. Gel. Anz. 1821(2): 710. 1821, name with indication of taxonomic doubt. Type: Brazil. Rio de Janeiro: between Cabo Frio and Campos, Sep 1815, Wied s.n. (isotypes: BR 8675323! – Nees nr. 35.35, BR 8674999!, GOET 000802!, GOET 000803! – Nees nr. 35.35, GOET 000804!, Herbarium Wied [102] (67, sterile), Herbarium Wied [114] (69), NY 00390873! – fragment).

= Andromeda crassifolia Nees, Flora 4: 297. 1821. Type: Brazil. Rio de Janeiro: near Cabo Frio, Sep 1815, Wied s.n. (isotypes: BR 8673978!, BR 8675651!, GOET 000805!, Herbarium Wied [94] (68), Herbarium Wied [108] (70)).

Gaylussacia brasiliensis (Spreng.) Meisn. var. oblongifolia Meisn., Fl. Bras. 7: 131. 1863 Andromeda coccinea Schrad., Gött. Gel. Anz. 1821(2): 709. 1821 Andromeda ciliata Nees, Flora 4: 297, 328. 1821. Type: Brazil. Rio de Janeiro: Cabo Frio, 1815, Wied s.n. (Nees nr. 34.34) (isotypes: BR 8674333!, BR 8674395!, GOET 000800!, GOET 000801!, Herbarium Wied [51] (73), NY 0010067!—Wied 11 ex LE).

ERYTHROXYLACEAE

Erythroxylum subrotundum A.St.-Hil., Fl. Bras. Merid. 2: 99. 1829.

Specimens: Brazil. Rio de Janeiro: Cabo Frio, Aug-Sep 1815, *Wied s.n.* (Menke nr. 29, Klaenze nr. 29) (BR 8674364!, BR 8675026!, BR 8674692!); Brazil. Without locality: s.d., Herbarium Wied [117] (39), Herbarium Wied [125] (38).

Erythroxylum virgultosum Mart., Beitr. Erythroxylon 109. 1840 (preprint of Abh. Math. Phys. Cl. Konigl. Bayer. Akad. Wiss. 3: 30. 1841). Holotype: Brazil. Rio de Janeiro: Cabo Frio, 1815, fl., Wied s.n. (BR 8674067! – F neg. 58511, isotypes: BR 8675774! (Klaenze nr. 18), Herbarium Wied [6] (1)).

EUPHORBIACEAE

Actinostemon concolor (Spreng.) Müll. Arg., Prodr. 15(2): 1193. 1866.

Specimens: Brazil. Rio de Janeiro: "in sabulosis ad Cabo Frio", 1815, *Wied s.n.* (Menke nr. 22, Klaenze nr. 26) (BR 6586294!, BR 6586256!, GOET!); Brazil. Without locality: s.d., Herbarium Wied [2] (8), Herbarium Wied [54] (6), Herbarium Wied [93] (9), Herbarium Wied [s.n.] (10).

Actinostemon klotzschii (Didr.) Pax, Pflanzenr. IV 147,5 (Heft 52): 69. 1912.

Specimens: Brazil. Rio de Janeiro: "in sabulosis ad Cabo Frio", 1815, *Wied s.n.* (BR 6586621 !, BR 6592196 !, BR 6587284 !); Brazil. Without locality: s.d.,

Herbarium Wied [3] (11).

Bernardia axillaris (Spreng.) Müll.Arg., Linnaea 34: 174. 1865.

Specimens: Brazil. Rio de Janeiro: "in silvis caeduis, prov. Sebastianopolit. et g. ad Cabo Frio", 1815, *Wied s.n.* (BR 8674098!, BR 8674425!); Brazil. Without locality: s.d., Herbarium Wied [17] (48).

Euphorbia sabulicola Boiss., Cent. Euphorb. 6. 1860.

Specimens: Brazil. Bahia: "in arenosis prope Caravelas", Sep-Oct 1816, *Wied s.n.* (BR 6586300!, BR 6586959!); Brazil. Without locality: s.d., Herbarium Wied [13] (32).

Pera ferruginea (Schott) Müll.Arg., Prodr. 15(2): 1031. 1866.

Specimens: Brazil. Espírito Santo: "in arenosis maritimis", s.d., *Wied s.n.* (Menke nr. 28, Klaenze nr. 28) (BR 6586638!, BR 6586966!, BR 6587291!, BR 6586317!, BR 6586645!); Brazil. Without locality: s.d., Herbarium Wied [100] (94), Herbarium Wied [109] (93).

FABACEAE

Centrosema brasilianum (L.) Benth., Comm. Leg. Gen. 54. 1837.

Specimens: Brazil. Bahia: "Rio Belmonte", 1816, *Wied s.n.* (BR 6584467!, BR 6583705!); Brazil. Without locality: s.d., Herbarium Wied [46] (104).

Chamaecrista desvauxii (Collad.) Killipi, Brittonia 3: 165. 1939.

Specimen: Herbarium Wied [57] (101), Herbarium Wied [61] (102).

Chamaecrista pascuorum (Mart. ex Benth.) H.S.Irwin & Barneby, Mem. New York Bot. Gard. 35: 747. 1982 vel *nictitans* (L.) Moench, Methodus 272. 1794.

Specimen: Herbarium Wied [79] (98).

Inga laurina (Sw.) Willd., Sp. Pl. (ed. 4)

4(2): 1018. 1806.

Specimens: Brazil. Rio de Janeiro: "Campos dos Goytacazes", Sep 1815, fl., *Wied s.n.* (GOET !); Brazil. Without locality: s.d., Herbarium Wied [62] (7).

Inga maritima Benth., London J. Bot. 4: 601. 1845.

Specimen: Herbarium Wied [27] (83).

Mimosa sp.

Specimen: Herbarium Wied [19] (100).

Pithecellobium sp. s.l.

Specimen: Herbarium Wied [28] (43).

Platymiscium floribundum Vogel, Linnaea 11: 199. 1837.

Specimen: Herbarium Wied [24] (103).

Senegalia sp.

Specimen: Herbarium Wied [18] (99).

Zollernia glabra (Spreng.) Yakovlev, Bot. Zhurn. (Moscow & Leningrad) 61(9): 1306. 1976.

= Zollernia falcata Wied-Neuw. & Nees, in Nees von Esenbeck & von Martius, Fridericia & Zollernia: 11, tab. D. 1827, later in Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur. 13(2): praef. xvi, tab. D. 1827 (Fig. 6). Protologue: "Habitat in ripa Paraibae fluminis, ubi Septembre et Novembre mensibus cum floribus lecta est haec species a Maximiliano, Principe Wiedensi". Holotype: Brazil. Rio de Janeiro: on banks of Rio Paraíba, Sep-Oct 1815, fl., Wied s.n. $(B^{\dagger} - F \text{ neg. } 1881 \text{ !, possible})$ isotypes: loco non indicato, s.d., fl., Wied s.n. (G!, MEL 2062015!, Herbarium Wied [48] (13), Herbarium Wied [140] (12)). (Fig. 7).

LAMIACEAE

Salvia splendens Sellow ex Nees, Flora 4: 300. 1821; idem in Wied-Neuwied, Reise Bras. 2: 335. 1821, "hochroth blühende",



Figure 6: Plate of Zollernia falcata Wied-Neuw. & Nees (1827a). (photo by Alain Chautems).

MORAES - THE BRAZILIAN HERBARIUM OF PRINCE WIED

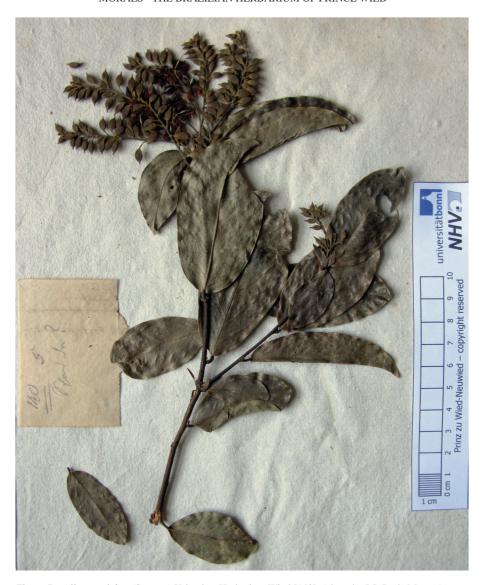


Figure 7: Zollernia glabra (Spreng.) Yakovlev. Herbarium Wied [140]. (photo by P.L.R. de Moraes).

cited priorly in Reise Bras. 1: 46. 1820, *nomem*. Type: Brazil. Rio de Janeiro: "in silvis et arbustis ad Cabo Frio", 1815, *Wied s.n.* (Nees nr. 37.37) (BR 6586973!, probable isotype: loco non indicato, s.d., fl., *Wied s.n.* (Herbarium Wied [77] (45)).

LAURACEAE

Ocotea montana (Meisn.) Mez, Jahrb. Königl. Bot. Gart. Berlin 5: 319. 1889.

Specimens: Brazil. Rio de Janeiro: "in arenosis ad Cabo Frio", Sep 1815, fr., *Wied s.n.* (GZU, not located, Herbarium Wied [59] (78), isosyntypes of *Ocotea squarrosa* (Nees) Mez).

Ocotea squarrosa (Nees) Mez, Jahrb. Königl. Bot. Gart. Berlin 5: 255. 1889. Nectandra squarrosa Nees, Syst. Laur. 326. 1836. Type: Brazil. Rio de Janeiro: "in arenis prope Cabo Frio", Sep 1815, Wied s.n. (GZU, lectotype designated by Rohwer, Mitt. Inst. Allg. Bot. Hamburg 20: 81. 1986, as 'holotype', not located, isolectotypes: BR 8806574!, BR 8805706!, GZU 000254288!, probable isolectotypes: Herbarium Wied [96] (74), Herbarium Wied [115] (92)).

= *Nectandra squarrosa* Nees var. *pyrifolia* Nees, Syst. Laur. 326. 1836.

Type: Brazil. Rio de Janeiro: "in arenosis ad Cabo Frio", Sep 1815, *Wied s.n.* (BR 8806215!, BR 8807236!, GZU 000254289!, Herbarium Wied [111] (91)).

LYCOPODIACEAE

Huperzia acerosa (Sw.) Holub, Folia Geobot. Phytotax. 20(1): 70. 1985.

Specimen: Brazil. Rio de Janeiro: Cabo Frio, 1815, Herbarium Wied [81].

MALPIGHIACEAE

Peixotoa sp.

Specimen: Herbarium Wied [98] (41).

Tetrapterys sp.1 s.l.

Specimen: Herbarium Wied [66] (84).

Tetrapterys sp.2 s.l.

Specimen: Herbarium Wied [67] (96).

MALVACEAE

Pavonia sp.

Specimen: Herbarium Wied [70] (40).

MELASTOMATACEAE

Marcetia taxifolia (A.St.-Hil.) DC., Prodr. 3: 124. 1828. Rhexia taxifolia A.St.-Hil., Monogr. Melast. 150., t. 57. 1823.

Specimens: Herbarium Wied [50] (29), Herbarium Wied [58] (30), Herbarium Wied [138] (31).

MORACEAE

Sorocea guilleminiana Gaudich., Voy. Bonite, Bot., tab. 74. 1844.

Specimen: Herbarium Wied [40] (14).

MYRTACEAE

Eugenia maximiliana O.Berg, Fl. Bras. 14(1): 250. 1857. Protologue: "Habitat ad villam Viçoza in prov. Porto Seguro: Pr. de Neuwied". Type: Brazil. "Bras. or.", s.d., Wied s.n. (BR! – 2 sheets, Herbarium Wied [49] (79), Herb. Sonder).

Specimens: Herbarium Wied [99] (80), Herbarium Wied [119] (81).

[= *Eugenia punicifolia* (Kunth) DC., Prodr. 3: 267. 1828].

Eugenia neosilvestris Sobral, Napaea 11: 36. 1995. Stenocalyx silvestris O.Berg, Fl. Bras. 14(1): 346. 1857. Eugenia silvestris (O.Berg) Mattos, Loefgrenia 54: 1. 1971, nom. illegit., non Moon (1824). Type: Brazil. Rio de Janeiro: Cabo Frio, Sep 1815, Wied s.n. (holotype: BR!, isotypes: BR!, Herbarium Wied [92] (82), Herb. Sonder).

Eugenia uniflora L., Sp. Pl. 1: 470-471. 1753.

Specimens: Brazil. Rio de Janeiro, Cabo Frio, Sep 1815, Wied s.n. (Menke nr. 103) (BR !); Brazil. Without locality: s.d., Herbarium Wied [12] (52).

Myrcia ovata Cambess. var. subcordata O. Berg, Fl. Bras. 14(1): 167. 1857. Protologue: "in arenosis maritimis s. Rettingas (sic), in fruticetis: Sellow, Princ. Neuwied n. 23". Syntypes: Brazil. Rio de Janeiro: Cabo Frio, 1815, Wied s.n. (Menke nr. 23, Klaenze nr. 23) (BR! – 2 sheets, Herbarium Wied [91] (75)).

Myrcia splendens (Sw.) DC., Prodr. 3: 244. 1828.

Specimens: Herbarium Wied [1] (76), Herbarium Wied [s.n.] (77).

Myrrhinium atropurpureum Schott, Syst. Veg. (ed. 16) 4(2): 405. 1827.

Specimen: Herbarium Wied [s.n.] (89).

NYCTAGYNACEAE

Bougainvillea *spectabilis* Willd., Sp. Pl. (ed. 4) 2(1): 348. 1799.

Specimens: Brazil. Rio de Janeiro: Aug-Sep 1815, *Wied s.n.* (BR 6586652 !, BR 6590048 !, GOET !, MEL 2331225 !); Brazil. Without locality: s.d., Herbarium Wied [129] (20).

OCHNACEAE

Ouratea aff. bahiensis Sastre, Bull. Jard. Bot. Natl. Belg. 51(3-4): 411, fig. 8. 1981. Specimens: Brazil. Without locality, s.d., Wied s.n. (Herbarium Wied [131] (95), MEL 2331216!); Brazil. Rio de Janeiro, Cabo Frio, 1815, Wied s.n. (MEL 2331218!).

Ouratea sp.

Specimen: Herbarium Wied [132] (2).

ONAGRACEAE

Ludwigia octovalvis (Jacq.) P.H.Raven, Kew Bull. 15: 476, f. 6d-e, 8h. 1962.

Specimens: Brazil. Rio de Janeiro: Cabo Frio, 1815, *Wied 6* (BR 6586324 !); Brazil. Bahia: "Rio Ilheos", 1816, *Wied s.n.* (Klaenze nr. 99) (BR 6587192 !); Brazil. Without locality: s.d., Herbarium Wied [83]

(19).

OXALIDACEAE

Oxalis puberula Nees & Mart., Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur. 12: 43. 1824. Type: Brazil. Bahia: "circa viam Felisberti, Centurionis", s.d., fl., Wied s.n. (Menke nr. 75; Nees nr. LXVIII) (lectotype: GOET 000775 !, isolectotypes: BR!, G, Herbarium Wied [7] (54), Herbarium Wied [31] (55), JE 00004923!, LD 1026501!, S).

PASSIFLORACEAE

Passiflora galbana Mast., Gard. Chron. 20: 555, fig. 97. 1896.

Specimen: Herbarium Wied [26] (114).

Passiflora racemosa Brot., Trans. Linn. Soc. London 12(1): 71, t. 6. 1818. Specimen: Herbarium Wied [11] (flower) (115).

PTERIDACEAE

Hemionitis tomentosa (Lam.) Raddi, Opusc. Sci. 3: 284. 1819. Specimen: Herbarium Wied [s.n.] (37).

Pteris leptophylla Sw., Kongl. Vetensk. Acad. Handl. 1817: 70. 1817.

Specimens: Brazil. Rio de Janeiro: Cabo Frio, 1815, Herbarium Wied [37] (Fil. – 2 sheets).

ROSACEAE

Rubus urticifolius Poir., Encycl. 6: 246. 1804.

Specimens: Brazil. Rio de Janeiro: "inter Rio de Jo. et Campos", 1815, *Wied s.n.* (BR 6587369!); Brazil. Without locality: s.d., Herbarium Wied [74] (17).

RUBIACEAE

Coutarea hexandra (Jacq.) K.Schum., Fl. Bras. 6(6): 196. 1889.

Specimen: Herbarium Wied [78] (34).

Descantia monodon (K.Schum.) E.L.Cabral &

Bacigalupo, Darwiniana 39(3-4): 353. 2001. Borreria monodon K.Schum., Fl. Bras. 6(6): 63. 1889. Scandentia monodon (K.Schum.) E.L.Cabral & Bacigalupo, Darwiniana 39(1-2): 37. 2001, nom. invalid. Specimen: Herbarium Wied [55] (66).

Emmeorhiza umbellata (Spreng.) K.Schum., Fl. Bras. 6(6): 408. 1888.

Specimens: Brazil. Rio de Janeiro: Cabo Frio, 1815, *Wied 7* (BR 6586676!); Brazil. Without locality: s.d., Herbarium Wied [93] (25).

Faramea sp.

Specimens: Herbarium Wied [9] (4), Herbarium Wied [87] (5).

Manettia sp.

Specimen: Herbarium Wied [39] (22).

Mitracarpus frigidus (Willd. ex Röm. & Schult.) K.Schum., Fl. Bras. 6(6): 81. 1888. Specimens: Brazil. Rio de Janeiro: Cabo Frio, Aug-Sep 1815, fl., Wied s.n. (BR 6587321!); Brazil. Without locality: s.d., Herbarium Wied [123] (50).

Rudgea sp.

Specimen: Herbarium Wied [30] (51).

Spermacoce sp.

Specimen: Herbarium Wied [101] (49).

RUTACEAE

Pilocarpus parviflorus Nees & Mart., Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur. 11: 177, t. 30. 1823. Type: Brazil. Rio de Janeiro: Cabo Frio, 1815, fl., fr., Wied s.n. (BR 8710345!, lectotype designated by Kaastra, Fl. Neotr. 33: 172. 1982, isolectotypes: BR 8710352!, BR 8710369!, Herbarium Wied [5] (15)).

[= *Pilocarpus spicatus* A.St.-Hil. subsp. & var. *spicatus*, Fl. Neotr. 33: 172. 1982].

SAPINDACEAE

Serjania sp.

Specimens: Herbarium Wied [95] (27), Herbarium Wied [112] (26).

SAPOTACEAE

Chrysophyllum splendens Spreng., Syst. Veg. 1: 666. 1825, synon. excl.

Specimens: Brazil. Without locality: s.d., fl., *Wied s.n.* (BR 6587314 !); Brazil. Espírito Santo: Barra de Jucu, Feb 1816, fl., Herbarium Wied [s.n.] (36).

Manilkara subsericea (Mart.) Dubard, Ann. Inst. Bot.-Geol. Colon. Marseille, ser. 3, 3: 22. 1915.

= Mimusops floribunda Mart., Flora 22(Beibl. 1): 3. 1839. Synarrhena floribunda (Mart.) Fisch. & C.A.Mey., Bull. Sci. Acad. Imp. Saint-Petersbourg 8: 256. Kaukenia floribunda (Mart.) Kuntze, Revis. Gen. Pl. 2: 406. 1891. Manilkara floribunda (Mart.) Dubard, Ann. Inst. Bot.-Geol. Colon. Marseille, ser. 3: 22. 1915. Protologue: "Crescit in arenosis, ad Oceani littus, e.g. prope Cabo frio". Syntypes: Brazil. Rio de Janeiro: "prope Cabo Frio", s.d., fl., Martius, herb. fl. Bras. no. 488 (M ! - F neg. 20102, BR !, G !, P 00645533 !, P 00645534!, W 0024033!); Brazil. Rio de Janeiro: "crescit in arenosis ad Cabo Frio", 1815, fl., Wied s.n. (Menke nr. 27, Klaenze nr. 27) (BR 6587307!, BR 6586980! sterile, G! - ex Herb. W. Sonder, Herbarium Wied [107] (86), Herbarium Wied [126] (87), Herbarium Wied [128] (88).

SCROPHULARIACEAE

Ildefonsia bibracteata Gardner, London J. Bot. 1: 185. 1842.

Specimens: Brazil. Rio de Janeiro: Cabo Frio, 1815, fl., *Wied s.n.* (BR 6586997 !); Brazil. Without locality: s.d., Herbarium Wied [72] (60).

Scoparia dulcis L., Sp. Pl. 1: 116. 1753.

Specimen: Herbarium Wied [23] (63).

SMILACACEAE

Smilax rufescens Griseb., Fl. Bras. 3(1): 9. 1842.

Specimen: Herbarium Wied [90] (24).

SOLANACEAE

Solanum aff. *asterophorum* Mart., Flora 21(2, Beibl.):79. 1838.

Specimen: Herbarium Wied [8] (110).

Solanum cordifolium Dunal, Encycl., Suppl.3: 764. 1814.

Specimens: Brazil. "in Brazilia orientali": s.d., *Wied s.n.* (Nees nr. 25) (BR 6587352!); Brazil. Without locality: s.d., Herbarium Wied [53] (97).

Solanum crotonifolium Dunal, Solan. Syn. 18. 1816.

Specimens: Brazil. Without locality: s.d., *Wied s.n.* (Nees von Esenbeck nr. 5) (GZU 000255523!); Brazil. Without locality: s.d., Herbarium Wied [15] (111).

Solanum jussiaei Dunal, Encycl. (Lamarck) Suppl. 3: 767. 1814.

Specimens: Brazil. Without locality, s.d., *Wied s.n.* (GZU 000255384!, Herbarium Wied [16] (112), Herbarium Wied [45] (113)).

TILIACEAE

Luehea paniculata Mart., Nov. Gen. Sp. Pl. 1: 100, t. 62. 1826. Type: Brazil. Minas Gerais: "in ascensu montis Itacolumi de Mariana", Apr., fl., von Martius s.n. (M! – F neg. 19678!).

Specimens: Brazil. Rio de Janeiro: Cabo Frio, 1815, fl., *Wied s.n.* (BR 6586331!); Brazil. Without locality: s.d., Herbarium Wied [29] (42).

URTICACEAE

Boehmeria caudata Sw., Prodr. 34. 1788. Specimen: Herbarium Wied [64] (62).

VERBENACEAE

Lippia virgata (Ruiz & Pav.) Steud., Nomencl. Bot. (ed. 2) 2: 751. 1841.

Specimens: Brazil. Rio de Janeiro: "nec non ad Cabo Frio", 1815, *Wied s.n.* (BR?, not located); Brazil. Without locality: s.d., Herbarium Wied [20] (64), Herbarium Wied [33] (65).

Petrea volubilis L., Sp. Pl. 2: 626. 1753.

= Petrea racemosa Nees, Flora 4(1): 300. 1821. Type: Brazil. Bahia: "fl. Rio Grande de Belmonte", 1816, Wied s.n. (Nees nr. 43.43) (BR 6586669!, lectotype designated by Rueda, Novon 3: 181. 1993, isolectotypes: G 00021057!, GOET 000759!, GOET 000760!).

Specimen: Herbarium Wied [35] (envelope nr. 25) (85).

INDETERMINATE

Species sp.1

Specimen: Herbarium Wied [89] (3).

Species sp.2

Specimen: Herbarium Wied [104] (58).

Although the private collection represents only a small fraction (c. 10% of species) of the whole Brazilian herbarium gathered by WIED, its historic and scientific relevance is undeniable. Up to the present, from its 98 species, 77 have been identified at the species level, 18 at genus level, one at the family level, and two still remain without any classification. From the 77 species already identified, 46 have probable duplicates found in at least one of the visited herbaria, and 20 are most likely duplicates of nomenclatural types. The private herbarium also possesses specimens that had not been distributed by WIED (at least no duplicate has been found so far). Unfortunately, WIED had indicated the locality of gatherings for only three species. However, it is possible to assume that species in the private herbarium with

specimens found in other herbaria would be duplicates of them for the majority of cases, by judging from the likelihood of the specimens. If so, 37 species have been indicated as collections in the state of Rio de Janeiro, 30 of them at or nearby Cabo Frio, thus from restingas (coastal, sandysoil, and scrub ecosystems), which are complex ecosystems of the coastal plain that have been continuously destroyed.

The most representative and assembled set of the collections by WIED is that currently deposited at Meise (BR), in Herbarium Martii. From the 650 numbers known to be kept there. I was able to locate 380 during 11 days of work in the herbarium. The herbaria at Geneva (De Candolle and General Collection) proved to house only few specimens by WIED, a situation also found at Munich (M). The latter, however, has some groups that are well represented, such as the Palms and Oxalidaceae. In herbarium at Graz (GZU), it was possible to check the entire collections of Acanthaceae, Lauraceae and Solanaceae, from part of the private herbarium of NEES VON ESENBECK that is kept there. For those families, many specimens collected by WIED were located. For the herbarium at Berlin (B), most of the specimens known to be there were not located and were most likely destroyed during the World War II. Fortunately, the Ferns seem to have been saved, at least partially, since several specimens are extant and have been located. The herbarium at Göttingen (GOET) proved to house a great parcel of duplicates by WIED from the private herbarium of Hermann Maximilian Carl Ludwig Friedrich zu Solms-Laubach (see Wagenitz 1982). There, many specimens were located, including several species that were not cited by former authors (and seem to have been not analysed by researcher, since they do not have any annotation), and species not identified vet. Unfortunately, it was not possible to check

the specimens for all the groups but, from the sample taken for the groups analysed, it is possible to assume that many other gatherings by WIED would be also present in that oblivious collection. In order to have the most complete scenario of HERBARIUM WIED, an effort for tracing his specimens to herbaria has been made, with the collaboration of the curators of herbaria at BR, FR, GOET, GZU, LD, LE, M, MEL and W.

From the list of toponyms and maps showing the places visited by WIED, it is clearly evidenced that he had travelled mainly through the coastal regions of states of Rio de Janeiro, Espírito Santo and Bahia, except for his excursions up to Rio Paraíba (RJ) and Rio Doce (ES), and his journey to the hinterlands of Bahia. Thus, most of the time WIED remained under the domains of the Atlantic rainforest, the biome which once entirely covered the narrow coastal strip partially visited by WIED and that is the current living place of the overwhelming majority of the over 180 million Brazilians. As pointed out by Por (1992:7), the Atlantic rainforest is one of the seven moist forest areas of the Neotropics and the second largest after the Hylaea, Amazonian rainforest. Its existence indelible with that of the Serra do Mar, the almost continuous Coastal Mountain chain of the East Brazilian Atlantic coast. According to Joly et al. (1999), the definition of the limits of this biome is polemic and has been at the centre of a long-standing academic controversy. At the time of WIED it was still possible to define the northern limit of the Atlantic Rain Forest belt, which was at the level of Cabo de São Roque at 50 S, in the state of Rio Grande do Norte. The southern limit is probably still the natural one situated at 30° S along Rio Taquari in the north of the state of Rio Grande do Sul (Por loc. cit.). The unique natural interruption of the long strip of tropical rainforest, which extends for

more than 4.000 km in the N-S direction, is the region between Cabo Frio (RJ) and Guarapari (ES), where the geomorphological and climatic characteristics promote the replacement of the forest by a xerophytic vegetation (Por loc. cit.; Joly et al. loc. cit.). This rainforest has variable width and comprises many physiognomies of forests that have in common their origin and evolution. Literature, and specially the Brazilian one, abounds with classifications of the different forest formations either on physiographic or on biogeographical grounds (Por 1992:9). Nevertheless, as pointed out by Joly et al. (1999), today there is enough evidence to understand that the different physiognomies of vegetation (Ombrophylous dense, Ombrophylous Open, Ombrophylous Mixed, Semi-deciduous and Deciduous Forests, as well as mangroves, restinga, dunes, estuaries, lagoons and high altitude rocky fields) present in the Atlantic Rain Forest Domain must be considered as Atlantic Forest sensu lato. Still, the authors quote that the Brazilian Atlantic Forest in its broader sense is considered one of the three most threatened ecosystems on Earth. When the Portuguese arrived in Brazil, five centuries ago, altogether the forest covered about a million square kilometers (Dean 1995:6), corresponding to about 16% of the surface of Brazil. By late 1993, S.O.S. Mata Atlântica had completed its survey of the entire Atlantic Forest over the five-year period 1985 to 1990. It showed that 5,330 square kilometers had been lost and that by the latter date only 83,500 kilometers, a little more than 8% of the forest that was presumed to have existed in 1500, remained (SOS Mata Atlântica 1993; Dean 1995:346), distributed in fragments highly dispersed, most of them in steep slopes of the Serra do Mar in the southeast region (Joly et al., loc. cit.). In the words of Dean (1995:363) Warren "[f]or hundred vears the Atlantic Forest has yielded easy pickings: parrots, dyewood,

slaves, gold, ipecac, orchids, and timber for the profit of their colonial masters and, burned and ravaged, an immensely fertile layer of ashes that made possible an effortless, mindless, and unsustainable agriculture. Population grew and grew, capital 'accumulated' while the forest disappeared". In spite of its considerable devastation, the Atlantic Forest is one of the five regions that present the highest level of endemism of vascular plants and vertebrates (excluding fishes), i.e. it is one of the world's 25 recognised "biodiversity hotspots", areas where an exceptional concentration of endemic species, those present only in limited areas, is undergoing exceptional loss of habitat (Myers et al. 2000). Therefore, the proportion of species threatened with extinction is also very high. Even though the current forests harbor a surprisingly high degree of biological diversity, very little remains of the original forest (Dean 1995). Thus, it is reasonable to infer that many species were eliminated before they could even be described (Câmara 2003).

As pointed out by Galindo-Leal & Câmara (2003), though it is possible to restore elements of biodiversity, species extinction is forever. The extensive habitat loss that has taken place in the Atlantic Forest hotspot region has endangered many scores of species. Of critical importance are endemic species, unique because they are irreplaceable. According to Tabarelli et al. (2003), lists of threatened species are the underpinning of initiatives to protect them, whether on a local, regional, or global scale. Preparation of such lists, or red lists, usually follows the method proposed by the International Union for Conservation of Nature (IUCN), which is responsible for updating the global Red List of threatened species (Tabarelli et al., loc. cit.; IUCN 2008). Population size, geographic distribution, and habitat availability are the basic variables used to determine the degree to

which a species is threatened.

In IUCN's (2008) Red List of Threatened Species, there are four species of WIED's private herbarium that have been listed: Inga maritima, considered endangered under criteria B1+2c, Sorocea guilleminiana as vulnerable A1c, Chrysophyllum splendens as vulnerable B1-2c and Manilkara subsericea risk/conservation dependent. However, none of them has been listed by the Revisão da Lista da Flora Brasileira Ameaçada de Extinção ("Revision of the List of Brazilian Flora Threatened with Extinction") executed by Fundação Biodiversitas, which by its turn has listed Ildefonsia bibracteata as critically endangered B2ab(iii).

Despite the fact that only few species of the private herbarium have been cited in lists of threatened species, it does not mean that many of them are saved from the risk of extinction, since they are endemic of the Atlantic forest, where the expectation of extinction is high due to the continue destruction of habitats. Besides, they were most likely collected in areas where the original vegetation no longer exists, thus representing plant samples of populations that have undergone local extinction. As such, they might also represent morphological variants that are not found in nature any more.

In short, species kept in the private collection of Brazilian plants gathered by WIED represent a precious register of the flora of the Atlantic rainforest of the 19th century. Its historical value is indisputable since WIED's vouchers are among the first ones collected in Brazil that are still extant. The specimens that have been reported here also have a remarkable scientific value, not only for being duplicates of nomenclatural types, but for sampling former vegetations that no longer exist in many of the places visited by the PRINCE.

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