

PROGRAMME & ABSTRACTS



Welwitschiana

Beyond Frederick Welwitsch's Collections

20 OCTOBER 2022

VIMIOSO PALACE • ROOM 205

UNIVERSITY OF ÉVORA • PORTUGAL

& ZOOM

REGISTER





CONFERENCE PROGRAMME

VIMIOSO PALACE, ROOM 205 & ZOOM

- 09h30** Reception
- 10h00** Welcome Session with Sara Albuquerque & Maria de Fátima Nunes (IHC — University of Évora / IN2PAST)
- 10h15** **Keynote speaker: Marianne Klemun (University of Vienna)**
Friedrich Welwitsch: Sponsorship and Competition: Letters and Different Ways of Negotiating a Global Travelling Naturalist as Persona
- 11h00** Mariana F.G. Assunção (ACOI — University of Coimbra), Mónica Zuzarte (iCBR — University of Coimbra) & Jorge Paiva (CFE — University of Coimbra)
Welwitsch and the mystery of the Angola Black Stones
- 11h20** Coffee break
- 11h40** Filipa Lowndes Vicente (ICS — University of Lisbon)
Who owns the collections? Friedrich Welwitsch (1806-72) between Angola, Portugal and Great Britain
- 12h00** Ana Cristina Tavares (Science Museum — University of Coimbra)
Meeting with Welwitschia mirabilis: a millennial living being of Moçâmedes/Namib desert
- 12h20** Jelmer Vos (University of Glasgow)
From Welwitsch to Douwe Egberts: reassessing Angolan robusta's place in the global coffee economy
- 12h40** Lunch



CONFERENCE PROGRAMME

- 14h30** M. Teresa Gonçalves (DCV / CFE) & Ana Margarida Dias da Silva (DCV / CHSC)
- Welwitschia mirabilis in the Botanic Archive of the University of Coimbra and Botany Collections: the circulation of wished-for specimens*
- 14h50** Filipe Covelos (CFE — University of Coimbra), Joaquim Santos (CFE — University of Coimbra) & Fátima Sales (CFE — University of Coimbra / Royal Botanic Garden Edinburgh)
- Friedrich Welwitsch (1806-1872): collection in the Herbarium of the University of Coimbra*
- 15h10** José Manuel Brandão (Centre for Functional Ecology at NOVA FCSH) & Sofia Mesquita Soares (National Laboratory of Energy and Geology)
- Welwitsch's prolegomena of Angolan geology*
- 15h30** Coffee break
- 15h45** António C. Gouveia (CFE — University of Coimbra) & Sandra Mesquita (CEABN — University of Lisbon)
- Under the care of Dr. Welwitsch: private and public gardens, plant collections, and horticulture in Friedrich Welwitsch's Portuguese years (1839-53)*
- 16h05** Ana Isabel D. Correia (CE3C / CHANGE — Faculty of Sciences, University of Lisbon / Herbarium LISU — Botanical Gardens, MUHNAC, University of Lisbon)
- Friedrich Welwitsch's Portuguese herbarium: a poorly known collection from Herbarium LISU*
- 16h25** Sara Albuquerque (IHC — University of Évora / IN2PAST), Ricardo Roque (ICS — University of Lisbon) & Tiago Navarro (CHAIA — University of Évora / IN2PAST)
- From scientific research to a children's tale: "Frederico and the Wonderful Plant" / "Frederico e a Planta Maravilhosa"*
- 16h45** Launch of the second edition of the book "Frederico e a Planta Maravilhosa" and Closing Remarks



ABSTRACTS AND BIOGRAPHICAL NOTES

3

Marianne Klemun (University of Vienna)

Friedrich Welwitsch: Sponsorship and Competition: Letters and Different Ways of Negotiating a Global Travelling Naturalist as Persona

During the last few decades, letters have been analysed from a wide variety of perspectives; network studies, biographical approaches, cooperation, doing science. This paper follows the concept of the scientific persona as proposed by Lorraine Daston and Otto Sibum in 2003. A scientific persona is an intermediate between individual biography and a scientific collective. It includes cultural and social repertoires on how to act and feel as a person of science, rather than considering it only a role or a mask that individuals assume. I will explore how a scientific persona in botany looked like and how we can describe travelling botanists as scientific personae. In what way were individuals determined by this construction? The concept of persona is based on the idea of a dynamic relationship between credibility in scientific assertions and the way how researchers perform and negotiate their professional identities as trusted botanists. It is fruitful to explore scholarly personae as a bricolage with old ideals (self-educated botanists, selfless exchangers of herbaria) by describing scholars as being different from other professionals (promoting the self by travel descriptions and competition), not only in terms of a specific person and context involved but also in regard to new requirements. Despite the empirical context of this paper, the source material focuses on one person, Friedrich Welwitsch. I will argue that the constituent repertoire of the botanist persona changed during the period of imperialism. The analysis of Welwitsch's previously overlooked letters to his benefactor, the Munich-based traveller Carl Friedrich Philipp von Martius (1794-1868), for instance can shed light on Welwitsch's resistance and ambivalence to the changed ideals of the persona.

Marianne Klemun, since 2002 Prof. at the Dep. of Modern History of the Univ. of Vienna (Working group on History of Science), more than 180 publications in History of Science (Early Modern Times, 18th and 19th Century). From 2006 to 2012, she was Vice Dean of the Faculty of Historical and Cultural Studies of the Univ. of Vienna, 2016-2020 Secretary Gen. and since 2020 Vice-Pres. (Europe) of INHIGEO. Her research fields include Cultures, Practices and Political Contexts of the History of Natural History (Geology, Botany, Gardens, Travelling, Collecting and Documentation). Recent books: with U. Spring (eds.), *Expeditions as Experiments*. Palgrave Macmillan 2016; with H. Hühnel, *N. J. Jacquin, ein Naturforscher (er)findet sich*. Göttingen 2017; *Wissenschaft als Kommunikation in der Metropole Wien*. Wien etc. 2020.

Mariana F.G. Assunção (ACOI — University of Coimbra), Mónica Zuzarte (iCBR — University of Coimbra) & Jorge Paiva (CFE — University of Coimbra)

Welwitsch and the mystery of the Angola Black Stones

During his extended stay in Pungo Andongo, Angola, with the mission of studying the vegetation and the soil capacity for agricultural purposes, Welwitsch came across a phenomenon of colors on the so-called "Black Rocks of Pungo Andongo". He verified that a kind of black mantled developed on the top of the mountains during



ABSTRACTS AND BIOGRAPHICAL NOTES

4

the rainy season, however, when the horizon above the Presidium became clear and bright (hot season), the rocks instead presented a gray color. In an attempt to confirm that it was not an optical illusion, after a few weeks of storm, Welwitsch climbed the Pedra Songue, one of the highest mountains in the Presidium. When he reached the plateau, he was immediately attracted to a shiny black substance. With his pocket lens, he realized at that moment that the mystery of the Black Stones color was nothing more, nothing less than a prolific growth of a filamentous alga. After a careful observation under the optical microscope, he reported a new species of the genus *Scytonema*, *Scytonema chlorographicum*, later described by W. and G. S. West as *Scytonema myochrous* var. *chlorographicum*. One hundred and fifty years later, one of us, J. Paiva, during one of his expeditions to Angola, collects a sample of the mysterious black mantle over those Black Rocks of Pungo Andongo. He religiously kept that sample and brought it safely back to the Coimbra Collection of Algae (ACOI), hoping to keep alive the Welwitsch's treasure. It was then isolated by Lilia Santos, the curator of ACOI, and been securely kept as strain ACOI 3424. Optical and electronic microscopy efforts were recently done as well as molecular biology in order to confirm and actualize the identity of isolate, since none of the above denominations are still taxonomically valid.

Mariana Assunção has a master's degree in biology from the University of Coimbra and is currently doing her PhD in Biosciences at the same University. Linked to the Coimbra Collection of Algae (ACOI) since 2010, she is the Technician/Lab Manager responsible for the maintenance of the collection and the services. Her main interests are: conservation and taxonomy of microalgae and cyanobacteria, cultivation and recovery of high-value biomass, characterization of metabolites (lipids, polysaccharides, pigments) and determination of extract bioactivities (antioxidant, antibacterial). She is author/co-author of three articles in indexed journals, three book chapters and has presented several panel and oral communications at different phycology meetings.

Monica Zuzarte obtained a degree in Biology in 2004, a master's degree in Plant Biotechnology in 2008, and a PhD in Biology (speciality Physiology) in 2013 from the University of Coimbra (UC). She is currently a researcher at Coimbra Institute for Clinical and Biomedical Research where she started a new line of investigation to explore the potential of plant metabolites in cardiovascular diseases. One of her major goals is to develop innovative preventive/therapeutic strategies to minimize the negative impact of cardiovascular diseases and improve patients' quality of life. In addition to her scientific career, Monica is an invited Professor at the Faculty of Pharmacy of UC and participates as a lecturer in MSc and PhD programs of the Faculty of Sciences and Technology and the Faculty of Medicine of UC. She also launched the biotech company QualityPlant, Lda in 2013.

Jorge A.R. Paiva, born in Angola (17.09.1933), Biologist (Botanist), PhD in Biology, was senior researcher and lecturer at the University of Coimbra, Aveiro, Madeira and Vigo (Spain), belongs, after retirement, to the group of researchers of the Center for Functional Ecology - Science for People & the Planet at the University of Coimbra.

Filipa Lowndes Vicente (ICS — University of Lisbon)

Who owns the collections? Friedrich Welwitsch (1806-72) between Angola, Portugal and Great Britain

My paper will explore the trajectory, appropriation, conflict and negotiation over the ownership of the natural history collection gathered by Friedrich Welwitsch



ABSTRACTS AND BIOGRAPHICAL NOTES

5

(1806-72) in Angola, an Austrian botanist commissioned by the Portuguese crown, in 1853, to undertake a trip to Angola with the aim of collecting and studying the natural resources of the region. In 1861, he returns to the capital of the country that sponsored his mission, but soon considers that Lisbon is not the appropriate centre of knowledge for the study of Angolan specimens and leaves for London with all the products collected. When a decade later Welwitsch dies in London, there remain the boxes and boxes of knowledge about an Angola that Portugal wanted its own. A legal conflict ensued for the possession of the collections between the Portuguese crown and the naturalists of Kew Gardens, already at the time one of the world's great centres for the study of botany. This case allow us to demonstrate how cultures of possession, study and exhibition are inseparable from political conjunctures and contexts of formation of national and colonial identities. «Colonies», «collections » and « knowledge» were, in the past, the object of conflict and negotiation between countries at the time of their formation. But in the present, we continue to struggle with the legacies of this heritage: who has the legitimacy to have, investigate and show material culture from elsewhere and, in many cases, obtained in contexts of inequality, armed conflict, or colonial hierarchy?

Filipa Lowndes Vicente, a historian, is a researcher at the Institute of Social Sciences (ICS) of the University of Lisbon. In 2015, she was a Visiting Professor at King's College, University of London and in 2016 at Brown University, Providence, USA. In 2000, she completed her PhD at the University of London (Goldsmiths College). Her PhD thesis was the origin for the book *Travels and Exhibitions: D. Pedro V in Nineteenth-Century Europe* (Lisbon: Gótica, 2003). Her research on colonial India and on 19th century orientalism in India and Italy has resulted in this publications: *Other Orientalisms: India between Florence and Bombay (1860-1900)* (Lisbon: ICS, 2009) – that has been published in India and Italy in 2012; and, in 2015, *Between Two Empires: British Travellers in Goa (1800-1940)*. In, and with Ana Rita Amaral, she edited *Literatura e Orientalismo: Cartas de Escritores Portugueses a Angelo de Gubernatis (1877-1906)* Lisboa: Tinta-da-China. Her work on women artists and feminist art history has resulted in a book published in Portugal titled: *A Arte sem História. Mulheres e cultura artística (séculos XVI-XX)* (Lisbon: Athena, 2012) and in the edition of the catalogue of the exhibition she curated in 2016 on a 19th century Portuguese woman painter: *Aurélia de Sousa, Mulher Artista, 1866-1922* (Lisboa: Tinta da China, 2016). She coordinated a two-year funded research project *Knowledge and Vision. Photography in the Portuguese Colonial Archive and Museum (1850-1950)*, and the result was an edited book with 30 authors - *O Império da Visão. Fotografia no Contexto Colonial Português (1860-1960)*, published in Lisbon, in Portuguese (2014).

Ana Cristina Tavares (Science Museum — University of Coimbra)

Meeting with Welwitschia mirabilis: a millennial living being of Moçâmedes/Namib desert

By getting to know in vivo the plant *Welwitschia mirabilis* Hook.f. subsp. *mirabilis*, an icon of Botany admired in books, it was immense the impact and emotion felt in the desert in Angola (2016). Sixty minutes in natural habitat with this amazing being, a dream realized, the immediate reaction was... write the history of that day: a chronicle of travel, to be perpetuated in a book (Tavares, A.C.P. *Sessenta minutos no deserto com... Welwitschia mirabilis!*. Edições MinervaCoimbra: Coimbra. 1ª edição, 2016; 2ª edição, 2017.). In addition to the Lubango's itinerary to Namib Desert, I gathered information about the past and future of the species.



ABSTRACTS AND BIOGRAPHICAL NOTES

6

An interdisciplinary approach is presented: of Biology, with descriptions of the taxon and "in vivo" and "ex situ" conservation; Geology, from Jurassic to current reality; Anthropology, with the Muíla-Mucubal culture, and History of Science, with paramount references to Friedrich Welwitsch (1806-1872) and other naturalists. This History of Life on Earth told by an endemism, is a simple contribution in memory of the 150 years of Welwitsch's death, the first European to describe the famous plant in 1859, named *Welwitschia mirabilis* in his honour. It is a rare specimen, in nature and museums, and is part of the Science Museum of the University of Coimbra collections, from expeditions to Angola by Luís Carriço (1886-1937), Professor of Botany at the University. The plant, one of nature's most bizarre, is a Gymnospermae, dioic, has longevity up to two thousand years and the species survived the dinosaurs. In addition to be an exclusive endemism of the Moçâmedes/Namib desert (from southern Angola to northern Namibia) it is a living fossil with very particular adaptive characteristics and that the book highlights. After 163 years of the first scientific *Welwitschia* description, still is shared knowledge and memories of this feat in the Moçâmedes/Namib Desert, where I also met the plant, remembering 157 years of the Welwitsch discovery.

Ana Cristina Tavares, is Curator of the Science Museum of the University of Coimbra (UC), biologist, PhD in Plant Physiology at UC and Post-Doctorate in Educational Sciences at the Portuguese Catholic University of Porto. Holds the International Diploma "Education in Botanical Gardens" (Kew Gardens, London), the Courses "Medicines and Plant-Based Health Products" (Faculty of Pharmacy, UC) and SCoRE'17 - Science Communication for Researchers in Education: Science Communication (University of Aveiro). At UC: she was professor at the Department of Botany and Faculty of Pharmacy, and in the Botanical Garden was responsible for the Educative Service, researcher-coordinator of the European Educational Project INQUIRE, integrating the National Advisory Group ("Science in Society", FP7-EU) and was deputy director; she participated in the Project of scientific infrastructures of university museums (PRISC and PORBIOTA). Along with specialized journals papers, she published eight books on Science, as: "*To the discovery of the world of plants*" (Editora Fonte da Palavra, Lisbon); in the UC Press "*Aromatic and medicinal plants of the Botanical Garden of Coimbra*", "*Rhythms of the Botanical Garden of Coimbra*"; and "*The algae who wanted to be flower*", this in five bilingual versions, awarded by Casa das Ciências (Porto) in 2016 (best educational resource) and 2017 (best online educational resource). In the virtual library Eumed (University of Malaga) with author edition: "*Tribute to the Botanical Garden of Coimbra, World Heritage, 2013*"; (bilingual) and "*Education in Botanical Gardens - 16 years of experience*". At Editora Minerva Coimbra: "*Sixty minutes in the desert with ... Welwitschia mirabilis!*" and, co-authored, and author edition, "*The Indian who wanted to know the world*". Research interests on the Conservation and Valorization of living and museological collections of Sciences, and on Science Education and Communication.

Jelmer Vos (University of Glasgow)

From Welwitsch to Douwe Egberts: reassessing Angolan robusta's place in the global coffee economy

Welwitsch's inventory of the coffee he found in the hinterland of Luanda in the mid-1850s opened a long discussion among botanists, breeders, and people in the coffee industry about the origin and quality of Angolan and other Central African coffees. The early confusion about this plant - was it arabica? Was it introduced,



ABSTRACTS AND BIOGRAPHICAL NOTES

7

naturalised, or indigenous? – never really disappeared, despite its botanical classification as a distinct African species, *Coffea canephora* or *C. robusta*, around 1900. The New York Coffee Exchange refused to trade robusta until 1930, because allegedly it was not coffee. Although the first traders claimed it tasted ‘as good as mocha’, coffee buyers long held indifferent opinions about the product, feeding the dismissive attitudes of experts, writers, and aficionados later in the century. Despite its commercial success after World War two, robusta’s history is tainted by ill-conceived comparisons with its biological cousin, *C. arabica*. This paper retraces the arrival of robusta in the world coffee market from around the time of Welwitsch’s first botanical classification and reassesses its reception by scientists and industry people in light of constantly evolving coffee knowledge, practices, and tastes.

Jelmer Vos is Lecturer in Global History at the University of Glasgow. He has published several articles and book chapters on rubber, coffee, slave and ivory trading in Angola and West Africa and is the author of *Kongo in the Age of Empire, 1860-1913: The Breakdown of a Moral Order* (University of Wisconsin Press, 2015). He is currently writing a monograph on the history of coffee cultivation in Angola (James Currey, forthcoming) and is co-editor of the *Oxford Handbook of Commodity History* (Oxford University Press, forthcoming).

M. Teresa Gonçalves (DCV / CFE) & Ana Margarida Dias da Silva (DCV / CHSC)

Welwitschia mirabilis in the Botanic Archive of the University of Coimbra and Botany Collections: the circulation of wished-for specimens

The Austrian doctor and botanist Friedrich Martin Joseph Welwitsch (1806-1872) described in 1859, for the first time, the famous Namib Desert plant *Welwitschia mirabilis*, thus named in his honor. The peculiar characteristics of this gymnosperm endemic to the desert of south Angola and north Namibia caused sensation at the time and made it a wished-for plant in herbaria, gardens and natural history museums. The Botanic Garden and the Botanic Institute at the University of Coimbra were centres of botanical knowledge, functioning as circulation platforms of biological specimens from the Portuguese African possessions to countries around the globe. For example, the Botanic Archive contains information about the arrival of packages with plants and seeds collected by Welwitsch in Angola, even before the discovery of *Welwitschia mirabilis*. Afterwards, Júlio Henriques (Botany Professor and Director of the Botanic Garden from 1873 to 1918) used his extensive and fruitful networks to obtain *Welwitschia* specimens and seeds by correspondence with Angola. Those specimens were exhibited in the Botany Museum, the seeds were successfully germinated and at least one seedling lived for about 12 years. Requests from foreign botanists soon arrived and records of that correspondence, as well as current online catalogues of European biological collections, provide information about the networks established by J. Henriques with European counterparts because of *Welwitschia mirabilis*. These networks remained active with the following directors: L. Carrisso, who did three botanic expeditions to Angola, and A. Fernandes. Teacher’s reports, inventories, photographs, and the Index Seminum yearly catalogues provide historical data about the circulation of *Welwitschia* specimens and seeds from



ABSTRACTS AND BIOGRAPHICAL NOTES

from Angola to Europe in the 19th and 20th centuries. The aim of this presentation is to give novel insight about the networks established between the University of Coimbra and European natural history museums and herbaria due to the famous *Welwitschia mirabilis*.

M. Teresa Gonçalves is an Assistant professor at the University of Coimbra (UC), teaching at the Department of Life Sciences. She holds a PhD in Plant Physiology and is a researcher at the R&D unit Centre for Functional Ecology. Her research interests focuses on the ecology of mycorrhizal fungi and also on the history of botany in the University of Coimbra. Since a few years, she is the curator of the Botany Archive of the UC.

Ana Margarida Dias da Silva holds a PhD in Information Science in the Faculty of Arts and Humanities of the University of Coimbra. At present, she is senior technician at the Life Sciences Department of the Faculty of Sciences and Technology of the University of Coimbra. She is a researcher of CIC.Digital Porto / CITCEM.

Filipe Covelo (CFE — University of Coimbra), Joaquim Santos (CFE — University of Coimbra) & Fátima Sales (CFE — University of Coimbra / Royal Botanic Garden Edinburgh)

Friedrich Welwitsch (1806-1872): collection in the Herbarium of the University of Coimbra

Friedrich Martin Josef Welwitsch (1806-1872), Austrian physician and naturalist who worked mainly in Portugal and Angola, became a recognized specialist in the flora of these countries. He collected several thousand specimens of Algae, Bryophytes, Fungi, Pteridophytes, Spermatophytes, which are in many herbaria and that were investigated to describe new taxa to science. Currently, his collections are mainly in the herbaria of Natural History Museum, London (BM), Universidade de Lisboa (LISU) and the Universidade de Coimbra (COI). Following the well-known court dispute over the Angolan's specimens between BM and the Portuguese government, BM kept the second-best set. The remaining material was sent to the Academia de Ciências de Lisboa. Despite the pressure for transferring them to COI, in 1874 they went to the Escola Politécnica de Lisbon, now LISU. According to Welwitsch's will, COI should receive duplicates of his materials. In 1876 there were 684 Angolan specimens in COI sent by the Escola Politécnica and 1,172 specimens from Portugal collected by Vallorado and Welwitsch. Currently, the Angolan material of Welwitsch in COI is c. 2,600 specimens (870 available in the COI Online Catalog, <https://coicatalogue.uc.pt/>) and very few from São Tomé and Príncipe. These specimens have different kinds of labels, e.g. labels Escola Politécnica and the original Welwitsch blue labels. The information on the labels is minimal, but there often is an additional label from COI with the original data. Some specimens were determined by Engler, Schumann, Loesener (Berlin) and Chodat (Genève). The Portuguese material is a few hundred specimens. Some are mounted on the same kind of paper as those of Vallorado who handwrote "Given by Mr. Dr. Welwitsch". Other specimens have the Escola Politécnica label. The number of cryptogams is also uncertain with 66 being available in the Online Catalogue.

12h40 Lunch



ABSTRACTS AND BIOGRAPHICAL NOTES

9

Filipe Covelo. Collections Manager at the Herbarium of the University of Coimbra, Department of Life Sciences. Specialist in the Portuguese Flora, botanical nomenclature and modern herbarium techniques. BSc in Environmental Education by the Polytechnic Institute of Viseu and MSc in Biodiversity and Plant Biotechnology by the University of Coimbra. Worked as herbarium technician in the project *"Red List of the Vascular Flora of Mainland Portugal"* and as Science and Technology Manager in the PRISC project – *"Portuguese Research Infrastructure of Scientific Collections"* in the Botanic Garden and in the Herbarium of the University of Coimbra. Collaborated on the project *"ReSEED – Rescuing seed's heritage: engaging in a new framework of agriculture and innovation since the 18th century"*, at the University of Coimbra.

Joaquim Santos. Collection Manager of the University of Coimbra Herbarium, Department of Life Sciences. BSc in Biology by the University of Coimbra and Master in Ecology by the same institution. Worked on several projects on botanical collections and their availability through the internet. Specialist in biodiversity data management and strategies to be adopted by scientific collections for the availability of data, being part of the core group of the MOBILISE action - *"Mobilizing Data, Experts and Policies in Scientific Collections"*, as co-leader of Working Group 2 (Development of Standards and Guidelines for Data gathering and large-scale digitization of collection objects).

Fátima Sales. Associate Professor at the Department of Life Sciences at the Faculty of Sciences and Technology of the University of Coimbra and Curator of the Herbarium (DCV). A plant taxonomist, with a PhD from the University of Edinburgh in 1991, she has worked in the floras of SW Asia, African and the Iberian Peninsula. Published scientific articles in Taxonomy of Poaceae, Lamiaceae, Campanulaceae and Fabaceae. Lecturer in the area of plant Diversity and Biological Collections, also supervisor of many MSc and PhD projects. Her main present interests are biological collections and historical herbarium collections.

**José Manuel Brandão (Centre for Functional Ecology at NOVA FCSH)
& Sofia Mesquita Soares (National Laboratory of Energy and
Geology)**

Welwitsch's prolegomena of Angolan geology

During the Iter Angolense (1853-1860), Welwitsch commissioned by the Portuguese government, collected a few thousand plants with which he prepared the extraordinary herbaria held in some Portuguese and other European museums. They still are a reference for studies of African flora. Besides gathering some collections of insects and small vertebrates, his naturalistic observations extended to Geology as well, in view to document some aspects of the lithology and morphology of the territories visited, while phytogeographic conditionings. Between 1855 and 1859, Welwitsch sent to the Museu Nacional de Lisboa in charge of the Academy of Sciences, at least three series of geological samples assembled during his herborizations, that he never got to consult, and on which no further studies are known. His geological notes were compiled by the French malacologist Arthur Morelet in the introduction of his monograph on the *Molusques terrestres et fluviatiles* collected by Welwitsch (1868), and taken up again, twenty years later, by Paul Choffat, from the Comissão dos Trabalhos Geológicos (Portuguese Geological Survey), in an article published in 1889. Choffat underlined the fact that such notes were not the result of a study based on materials gathered in Angola, but the result of his memories, field annotations and drawings, since their samples



ABSTRACTS AND BIOGRAPHICAL NOTES

10

seem to have been lost somewhere between institutions. However, during the recent works of reorganization of the African geological collections housed in the Core Library (Litoteca) of LNEG in Alfragide, a small set of Welwitsch's samples, mainly fossils, here disclosed for the first time, was located. In this communication, biographical, bibliographic, and archival elements are put together with Welwitsch's surviving geological samples, highlighting his contribution for the knowledge, at the time, of Angola's geology.

José Manuel Brandão. Geologist, MSc. in Museum studies, Ph.D. in History and Philosophy of Science. Held positions in teaching, as a museum education officer at the National Museum of Natural History, University of Lisbon, and Curator of the Geological Museum, at the former Portuguese Geological Survey (current LNEG - Laboratório Nacional de Energia e Geologia). Researcher of the Centre for Functional Ecology at NOVA FCSH. Main interests: History and museology of the Earth Sciences and mining in Portugal. Author and co-author of several works within the scope of teaching and outstretch of Earth Sciences, and mining heritage.

Sofia Mesquita Soares. Bachelor in Geology (Faculty of Sciences of the University of Porto), master in Geo-resources – Geotechnical Engineering area (Instituto Superior Técnico, Technical University of Lisbon) and Ph.D. in Engineering Geology (Nova School of Science and Technology). Ore mineralogist at the mining company Pirites Alentejanas, S.A. – Aljustrel (1994-1996). Professor at ESTIG, Polytechnic Institute of Beja. Responsible for the Soil Testing Laboratory between 1996 and 2017. At the present time is geologist at LNEG (Laboratório Nacional de Energia e Geologia), in the research unit of Geology, Hydrogeology and Coastal Geology with tasks on the supporting the State and public policies in the areas of geology, and responsible for the Alfragide core library (Litoteca).

António C. Gouveia (CFE — University of Coimbra) & Sandra Mesquita (CEABN — University of Lisbon)

Under the care of Dr. Welwitsch: private and public gardens, plant collections, and horticulture in Friedrich Welwitsch's Portuguese years (1839-53)

“This establishment [Quinta do Lumiar] is also fortunate in being under the care of Dr. Welwitsch, the only person we met with in Portugal who is equally familiar with the theory and the practice of Botany. Dr. Welwitsch is also minutely versed in the Portuguese Flora.” In a letter to William Hooker at Kew, detailing the “present state of botany and botanic gardens in Portugal” around 1845, John Scouler, professor of Natural History at the Royal Dublin Society, saves the biggest compliments both as a botanist and horticulturalist to Friedrich Welwitsch [1806-1872], at the time responsible for the gardens in the estate of the Duke of Palmela, having recently left his role as Conservador (curator) of the Ajuda Botanic Garden, in Lisbon [1840-1844], where, again in the words of Scouler, “many of the plants have their names attached, which was done by Dr. Welwitsch when he had charge of the garden.” In fact, Welwitsch's additions to the garden comprised more than 800 taxa, promoted by an intense exchange of plants with national and international botanists and private collectors. Welwitsch's botanical work thus stood out, in a country weakened by wars and political unrest, with a fragile academia and feeble scientific institutions related to the plant sciences. The same was valid for horticulture, with Bento António Alves, plant collector and nursery owner, stating in 1849 that of the Portuguese plants available in the national and



ABSTRACTS AND BIOGRAPHICAL NOTES

11

European horticultural trade “we owe most of their possession, and notions about the different ways of their culture and multiplication, to the disinterested friendship of Dr. Frederico Welwitsch.” This intense activity was eclipsed by Welwitsch’s well-known subsequent African period when his work gained a geopolitical dimension. We propose to examine Welwitsch’s work as garden curator and horticulturalist, roles developed in parallel with his study of the Portuguese flora, while amassing the experience and reputation that took him to Angola.

António Carmo Gouveia holds a PhD in plant ecology and is a researcher at the Department of Life Sciences and at the Center for Functional Ecology at the University of Coimbra, where he also collaborates with the UNESCO Chair in Biodiversity and Conservation for Sustainable Development. He was director of the Botanical Garden of the University of Coimbra and of the Parque da Fundação de Serralves, and national representative to the European Consortium of Botanical Gardens. His research projects cover the history and communication of science, scientific collections, plant diversity and ecology, citizen science initiatives and documentaries, collaborating with institutions in São Tomé and Príncipe, Angola and Mozambique.

Sandra Mesquita is a PhD Candidate in Landscape Architecture and Urban Ecology, has a degree in Landscape Architecture and a Masters in Geographic Information Systems. She has 20 years of experience in private practice as a botany and vegetation ecology consultant and as a landscape architect. Consultant for government agencies, universities and private companies, such as the Institute of Nature Conservation and Forestry (e.g., Predictive Mapping of major forest species in Climate Change Scenarios); Instituto Superior Técnico (e.g., Mapping and Assessment of Ecosystems and Their Services (MAES) in Alentejo); Instituto Superior de Agronomia/CEABN; Profico Ambiente (e.g., Master Plan and Detailed Design for Ecological Protection and Improvement of Tasitolu, Timor Lorosa’e, Environmental Impact Assessment for several major projects); Mãe d’Água (e.g., Environmental Auditing and Monitoring of Lauca Hydroelectric Project, Kwanza River, Angola). Current research interests: botanical history, vegetation and ecosystems mapping.

Ana Isabel D. Correia (cE3c / CHANGE — Faculty of Sciences, University of Lisbon / Herbarium LISU — Botanical Gardens, MUHNAC, University of Lisbon)

Friedrich Welwitsch's Portuguese herbarium: a poorly known collection from Herbarium LISU

The LISU Herbarium contains an interesting collection of vascular plants (more than 4000 specimens) collected by Friedrich Welwitsch in Portugal, before he travelled to Angola in his well-known expedition. The Welwitsch Portuguese collection was reviewed by A.X. Pereira Coutinho at the beginning of the 20th century and partially revised in the eighties (20th century). The study of the collection was recently resumed. The collection will be presented, with a main focus on the specimens from the Algarve: Welwitsch planned a publication on the Flora of this province which was never completed.

Ana Isabel D. Correia is an Assistant Professor in Departamento de Biologia Vegetal, Faculdade de Ciências da Universidade de Lisboa (Department of Plant Biology, Faculty of Sciences, University of Lisbon) and Curator of Vascular Plants at Herbário LISU - Jardim Botânico (Herbarium LISU - Botanical Garden), Museu Nacional de História Natural e da Ciência. Her present main interests are the historical botanical collections in Herbarium LISU.



ABSTRACTS AND BIOGRAPHICAL NOTES

12

Sara Albuquerque (IHC — University of Évora / IN2PAST), Ricardo Roque (ICS — University of Lisbon) & Tiago Navarro (CHAIA — University of Évora / IN2PAST)

From scientific research to a children's tale: "Frederico and the Wonderful Plant" / "Frederico e a Planta Maravilhosa"

Frederico Welwitsch (1806-1872) was an Austrian botanist who found the Welwitschia plant in the Namib Desert in Angola. "Frederico and the Wonderful Plant" is the story of Frederico and his encounter with a special plant that lives in the Namib desert, Africa. This story is born from the imagination of a meeting that took place on September 3, 1859. Sara, throughout her investigations spent countless hours among archives, herbaria and collections of objects. She soon became acquainted with and enchanted by Welwitsch's collections. Ricardo accepted the challenge and gave life to this story with his friendly and expressive illustrations. Tiago was responsible for the book's beautiful design and pagination. From these encounters, a story is born: the meeting between a desert plant and the naturalist Frederico.

Sara Albuquerque, biologist and historian, is a researcher in History of Science at IHC — University of Évora. She worked previously as a post-doctoral researcher at the same research unit (2014-2019), at the Natural History Museum in London (2013) and the Royal Botanic Gardens, Kew (2007-2012). While at RBG, Kew she obtained a collaborative award and concluded her PhD in History of Science at Birkbeck College, University of London in 2013. She is Honorary Research Associate at RBG, Kew and a Fellow of the Linnean Society of London.

Ricardo Roque, historian and anthropologist, is a Research Fellow at the Institute of Social Sciences (ICS) of the University of Lisbon. He works on the history and ethnography of human sciences, racial collections and colonial archives. He is the author of *Headhunting and Colonialism* (2010) and the co-editor of *States of Imitation* (2020), *Luso-tropicalism and Its Discontents* (2019), and *Engaging Colonial Knowledge* (2012), among other works.

Tiago Navarro, Designer and researcher, he has been dedicated to studies related to digital typography and press; he has a PhD in Design/Typography from the Polytechnic University of Valencia. He is currently an assistant professor at the University of Évora, belonging to the School of Arts; he is director of the Degree in Design. Between 2013 and 2014 coordinator of the Communication Office at the University of Évora. He is founder of the scientific journal *Grafema* (ISSN 1647-1024) and co-editor of the scientific journal *Deforma* (ISSN 2253-8054).