

## **Mapping Domeyko:**

### **A visual arts project inspired by the expeditions of Ignacy Domeyko**

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Chile, with its rocky cordillera, overflowing with mineral wealth, holds the largest reserves of copper on the planet Earth. This mineral kingdom was yet to be discovered in 1838 when Domeyko reached Chile, as his arrival coincided with a remarkable phase of development in copper and silver mining in Chile. The country presented itself as an intriguing and exciting land, full of new discoveries and adventures. While main purpose of Domeyko's work in Chile was to take up a teaching position in Coquimbo, which he carried out with care and dedication, he took full advantage of every opportunity that presented itself in order to explore the Andes mountains. This helped him collect educational material for his students but also satisfied his thirst for knowledge. As Paz Domeyko notes *'from the moment of his arrival, the nearby mountains and the mines they contained had beckoned to his avid curiosity. No sooner was the school year over than Ignacio left on his first long-awaited excursion to explore them'*<sup>1</sup>.

In his numerous field expeditions, particularly frequent during his time teaching in Coquimbo between 1838 and 1847, Domeyko visited, amongst others: the silver mine in Arqueros (1838), the Carrizal copper mine (1840), the Chañarcillo silver mine (1840), the San Pedro Nolasco silver mines (1841), the El Teniente and El Volcano mines (1842) and smaller mines found during his journey to Araucania (1844-1845).

These journeys, together with other trips to the Andes carried out less frequently after his relocation to Santiago, resulted in many detailed scientific analysis and publications. Perhaps less known than his numerous publications are the mineral collections that resulted from these expeditions, which he shared with the *École des Mines* in Paris and the Polish institutions which he corresponded with. The logistics of transporting these minerals in the nineteenth century has triggered our interest in pursuing a new artistic investigation into to the pathways of his parcels.

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<sup>1</sup> Domeyko, P. (2005) *A Life in Exile. Ignacy Domeyko 1802-1889*. Sydney: Bookbuilders, p.107.

The traces of his collections can be found in the geological museums in Chile, France and Poland. The first of these is the Muzeum Geologiczne of Uniwersytet Jagielloński in Kraków, which holds 97 specimens donated by Domeyko on three occasions in 1853, 1871 and during his visit in 1884<sup>2</sup>. The second is the Muzeum Geologiczne of the Polish Academy of Science in Kraków, which holds 51 mineral and two meteorites donated in 1878 and 1884<sup>3</sup>. The third, the Museo Mineralógico de Ignacio Domeyko at the Universidad de La Serena, holds Ignacy Domeyko's personal collection, formed by 2,140 mineral specimens. This collection was purchased from Domeyko's grandson by the Chilean Government in 1951, through the President Gabriel González Videla, and donated to the La Serena School of Mines. Finally, a fourth mineral collection is held at the Musée de Minéralogie at Mines ParisTech, and is composed of 143 specimens donated by Domeyko between 1861 and 1886.



Fig. 1 Emplectite. Mines ParisTech, Paris (2014). From the series Mapping Domeyko © Acosta and Bojczuk

<sup>2</sup> Koszowska E., Wolska, A. (2002) 'Domeyko's collection in the Jagiellonian University' in *Polish Mineralogical Society - Special Works* v. 21. Krakow: Jagiellonian University, 51-60.

<sup>3</sup> Koszowska, E., Łaptaś, Paulo A. (2002) 'Domeyko's collection in the Geological Museum of the Institute of Geological Sciences of the Polish Academy of Sciences' in *Polish Mineralogical Society - Special Works* 21, 37-50.

A particularly thorough source of information for understanding the mobility of these minerals specimens from Coquimbo to Europe were the letters that Domeyko wrote to his cousin Władysław Laskowicz<sup>4</sup>.

*Na początku marca, przez wracającą do Francji fregatę Andromeda, posłałem pakę minerałów i moje rozprawy do p. Dufrénoy (do szkoły Min) i pod jego adresem umieściłem pakiet zaadresowany do księcia Czartoryskiego, gdzie się znajduje jeden mniejszy pakiet adresowany do Mickiewicza, a drugi do Witwickiego. Nie zaniedbaj donieść mi, czy wszystko doszło do swego przeznaczenia<sup>5</sup>.*

*At the beginning of March, when the frigate Androméde was returning to France, I sent a pack of minerals and my essays to Mr. Dufrénoy (of the school of Mines). To his address I also sent a packet for Prince Czartoryski, which includes another smaller packet for Mickiewicz and another for Witwicki. Please do not neglect to inform me whether everything arrives at its destination<sup>6</sup>.*

On 1 March 1840, in a letter from Coquimbo (part of which is presented above), Ignacy Domeyko wrote to Władysław about a pack minerals and articles that he had sent to the director of the École des Mines in Paris, Pierre-Armand Dufrénoy, who in 1837 had offered him the teaching post in Chile. Domeyko also mentions two small parcels addressed to the Polish poets, Adam Mickiewicz and Stefan Witwicki. Awaiting confirmation of consignments was a nerve-racking experience for Domeyko. More than a year had passed before he learned whether his shipments had reached their final destinations. This scene of expectation is described in a letter to Władysław written on 23 January 1841:

*Nie mam też wiadomości, czy posyłka minerałów i pakiet rozpraw, które rok temu wysłałem przez fregatę wojenną francuską Andromeda, doszły do pana Dufrenoya i co z nimi zrobiono.*

*I have still received no news as to whether the shipment of minerals and the parcel with the essays, which I sent a year ago on the French frigate Andromeda, have been received by Dufrénoy and what he has done with them<sup>7</sup>.*

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<sup>4</sup> Domeyko I. (1976) *Listy do Władysława Laskowicza* [Letters to Władysław Laskowicz]. Warsaw: Instytut Wydawniczy Pax.

<sup>5</sup> Domeyko I. (1976), p.38.

<sup>6</sup> Polish-English translations by Jakub Bojczuk.

<sup>7</sup> Domeyko I. (1976), p.40.

Domeyko had to trust other people sailing to Europe to take care of his mineral deliveries. He usually handed his packs to captains, consuls or friends. Twice, in April 1841 and April 1843, he handed his consignments to Henri Cazotte, the French general consul and charge d'affaires in Santiago between 1841 and 1857. On another occasion he sent the minerals with his friend, the famous naturalist Claude Gay. As Domeyko himself describes in the same letter:

*Jeżeli się obaczysz z p. Dufrénoy powiedz mu, że mam dla szkoły górniczej nową pakę minerałów po większej części srebra, które spodziewam się wysłać za pośrednictwem konsula francuskiego p. Cazotte, przez pierwszy okręt wojenny, jaki stąd wyjdzie. Razem wyślę do moich dawnych profesorów rozprawę Sur les mines d'amalgame natif etc, rzecz wcale nową dla nich.*

*If you meet Mr. Dufrénoy, tell him I have a new mineral pack containing silver for the mining school, which I expect to send through the French consul, Mr. Cazotte, on the first battleship to leave. I will include my essay "Sur les mines d'amalgame natif au Chile", dedicated to my former professors, the contents of which are not new to them.*

The complexities of transporting minerals between the remotes geographies of Coquimbo and Europe are documented in the letters Ignacy Domeyko wrote to Władysław Laskowicz. Domeyko often complained about the lack of response from the professors at the École des Mines. He was particularly keen on receiving the geological journal *Annales des Mines*. In one of his letters, he pointed out that, although he sent them valuable minerals, they did not send him the materials he requested. His modest approach made him ultimately admit that in the end he owed them more than they did him. He was, perhaps, referring to the contract in Chile, which would not have had were it not for Dufrénoy.

*Wiem, że fregata La Chartre, na której bogatą kolekcją minerałów i moje (me)moary i mapy posłałem panu Dufrénoy (pod adresem p. Legrand) przybyła do Francji w miesiącu oktobrzu, zapytaj więc proszę u tego pana, czy posyłkę odebrał czy nie. Drugą też posyłkę minerałów wyprawiłem stąd przez młodego Monreala. Mogę was zaręczyć, że w samych kamieniach, jakie do Szkoły Min darowałem, jest przynajmniej kilkanaście funtów srebra, a oni nawet swoich annalów pożalowali, annalów, które 20 franków na rok kosztują. Ale o tym nie ma co mówić, zawsze dziękuję Bogu, gdy mogę dać więcej niż to, co oni mi dają, a zresztą porachowawszy się sumiennie, więcej im winienem niż oni mnie.*

*I know that the frigate, La Chartre, with a rich collection of minerals, memories and maps, which I sent to Mr. Dufrénoy (at Mr/ Legrand's address) arrived in France in the month of October. So please ask this man whether he received it or not. The second pack of minerals was sent from here with young Monreal. I can assure you that with the stones I sent to the School of Mines there were at least a few pounds of silver, and they did not even send me Annales in return, a publication which costs 20 francs a year. But there is nothing to say about it, I always thank God when I can give more than I receive. Anyway, having made conviction with conscience, I am more in debt to them than they are to me.*

In another letter, Domeyko was content to hear that his pack of minerals had reached London. This was the first parcel he sent to Uniwersytet Jagielloński in Kraków. It took over a year for the minerals to finally get to their destination. Domeyko's relations with the director of the Institute of Geology and Zoology, Ludwik Zejszner, were particularly close after Domeyko was invited to work there. With regret, he had to decline his offer because of other existing arrangements relating to his marriage to Enriqueta in 1850.

*W tych dniach wyprawilem posyłkę, o której mówię w liście do Zejsznera. Oddałem ją kompanii handlowej Gibbs y Compagnie, która ją wyśle na pierwszym dobrym okręcie do Swansea w Anglii, pod adresem pana Lambert, i pewien jestem, że nie zaginie, chyba w razie rozbicia okrętu. Pan Lambert jest już uwiadomiony o tym i przyrzekł mi wręczyć tę posyłkę tobie, abyśmy przez dobrą okazję wyprawili ją do Krakowa. Lękam się tylko, żeby jej nie otworzono na cle francuskim, dlatego piszę do p. Lambert, prosząc go, aby ją oddał jakiemu wielkiemu panowi, z tych co się nieustannie wódczą z Anglii do Paryża, lub też, jeżeli nie znajdzie jakiego sposobu na to, uwiadomił ciebie pierwiej listownie, abyś miał czas napisać do kogo w Hawrze czy w Boulogne, żeby miał w swojej opiece tę posyłkę, jak ją będą rewidować na komorze.*

*In recent days I have sent a consignment, which I refer to in my letter, to Zejszner. I have given it to Gibbs y Compagnie. It will go on their first best ship to Swansea in England, to Mr. Lambert, and I am sure it will not be lost, unless the ship sinks. Mr. Lambert is already aware of this and has promised me to hand it over to you so that you can post it to Kraków in good time. Because I fear it might be opened on the French frontier, I am writing to Mr. Lambert, asking him to give the parcel to someone important who travels regularly from England to Paris. If this cannot be arranged, he will inform you by letter so you have the time to write to someone in Le Havre or Boulogne to take care of it while being reviewed it in the chamber.*

### **A contemporary response to the mobility of mineral collections**

Since 2014, based on Domeyko's memoirs 'My Travels' (Diaries in Exile), we have engaged in a series of journeys through the global trajectories of Domeyko in Poland, Chile, France and Lithuania. In our research, we have collected archival materials (documents, books, maps and photographs) and produced contemporary visual works (photographs, drawings, texts and maps) that speak about the relationship between mineralogy, history and travelling.



Fig. 2 Domeyko, I. (1962–1963) *My Travels (Diaries in Exile)*, Volumes I-III. Wrocław: Ossolineum

These materials will form a part of an exhibition titled *Mapping Domeyko* that will be put on at Łaźnia Centre for Contemporary Art, Gdańsk, Poland between November 2017 and January 2018.

As part our investigation, we visited the mineral collections where traces of Domeyko's geological expeditions can be found: the Universidad de La Serena (June 2014), the Uniwersytet Jagielloński (October 2014), the Polish Academy of Science (October 2014), and the Mines ParisTech (November 2014). Each of these mineralogical collections was photographed with a large format view camera. Afterwards, these images were exhibited within the same museum displays, alongside with photographs of the other institutions, activating a cultural exchange between them.

Between 2015 and 2016, inspired by the donation of minerals made by Domeyko in the nineteenth century, we facilitated a new exchange of mineral specimens between the Uniwersytet Jagielloński and the Universidad de La Serena. The idea was encouraged and supported by Dr Ewa Koszowska and Ivonne Flores, museum curators at these institutions. The exchange consisted in five mineral rocks per

museum and, following the nineteenth-century spirit, no money was spent on freight forwarders. Thus, the minerals were transported by us and through a willing chain of family and friends who kindly carried these specimens in their luggage. Five stones donated by the Polish University are on display in Chile, while the Geological Museum in Kraków is awaiting the launch of their new campus at the Uniwersytet Jagielloński before officially displaying the stones brought from Chile.



Fig. 3 The mineral specimens from Chile donated by the Universidad de La Serena to Uniwersytet Jagielloński.  
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Scientific name	Origin
Atacamita	Chuquicamata, Chile
Calcantita	Chuquicamata, Chile
Cuprita-Calcosina	Chuquicamata, Chile
Chrysocolla	Chuquicamata, Chile
Antlerita	Chuquicamata, Chile



Fig. 4 The mineral specimens from Poland, donated by Uniwersytet Jagielloński and currently exhibiting at the Universidad de La Serena. Image courtesy of Ivonne Flores

Scientific name	Origin
Chromite	Tapadła mine, Gogołów-Jordanów, Serpentine Massif, Poland
Disseminated and massive copper mineralization (chalcocite, digenite)	Rudna Mine, Fore-Sudetic Monocline, Poland
Marcasite, galena and schalenblende	Pomorzany Zn-Pb Mine, Poland
Chalcocite, bornite vein mineralization	Rudna Mine, Kupferschiefer, Fore-Sudetic Monocline, Poland
Schalenblende and marcasite	Pomorzany Zn-Pb Mine, Poland

This exchange activated a series of artistic works, contributing to a series of photographic studies, drawings and a sculptural piece titled *The journeys of five rocks from Chile to Poland and other five from Poland to Chile* (2016) that will be installed at the Centre for Contemporary Arts, Łaźnia. The piece was produced in collaboration with the Chilean artist Livia Marin and developed during an artist residency at the Academy of Fine Arts in Gdańsk in July 2016. It consists of more than 100 sculptures based on the ten minerals and reproduced in plaster using casting and molding techniques.