

Early Career Research Profiles

This profile series on young members of INHIGEO is to create a space where early career scholars can present their studies and research interests within the history of the geological sciences to the whole membership and anyone who receives the newsletter, in order to highlight their field of expertise. It is hoped this will lead to contacts and collaborations for the future through our extensive network. Our profile this month is on a Ph.D. student from Argentina.

Name: Mariana Ferrari Waligora

Studies:

Currently: Ph.D. candidate in History of Science:
Faculty of Natural Sciences and Museum, at the
Universidad Nacional de La Plata, Argentina.

2016: M.Sc. in Microbiology and Biochemistry: Faculty
of Biology and Psychology, at the Georg-August-
Universität Göttingen, Germany.



Title of Ph.D:

“Museums and Scientific Exchanges in the Global South. The Fossil Genus *Glossopteris* and the Continental Drift Theory, 1915-1940”

The general aim of this project consisted in tracking back the exchanges conducted during the end of the 19th and beginning of the 20th century, between different museums and southern hemisphere geologists/palaeontologists interested in proving the ancient existence of the southern Pan-continent Gondwanaland. The focus was on the circulation of the fossil specimens of the botanical genus *Glossopteris*. This was found in Paleozoic strata of all the southern hemisphere continents and India and was one of the main pieces of evidence for the ancient connection of these continents. The research showed the shifting of meanings linked to this fossil type in time, from its description, associated with the search of coal in India and the southern continents, its significance for the concept of Gondwanaland, following up to its importance as proof of the continental drift theory in the first half of the 20th century.

In South America, *Glossopteris* was found mostly in southern Brazil and Argentina, and these strata were closely correlated especially with South African strata. Thus, greater attention was paid to the studies of *Glossopteris* in these countries. In Argentina, the focus was mainly on the revaluation of the documental heritage from the Italian geologist and physician Joaquín Frenguelli (1883-1958), who had an important career in this country in the first half of the 20th

century. He had an invaluable role in the development of the sciences, in different fields, such as Geology, Geomorphology, Palaeontology, Zoology, Botany, Anthropology and Protozoology, and also had an active role in supporting the continental drift theory. In his studies about the Argentinian phytogeography, he presented the vegetation as an inseparable part of the geological structures. His observations, networks and paleobotanical collections were essential to a synthesis of the stratigraphy of the continental Superior Paleozoic.

Research interests: My research is oriented to the history of the collections of the museums of natural history and the Earth sciences. The collaboration between different regions of the world, each one with a particular access to the local evidence of the planet's history, allows the articulation of the local and global scales, a theme of particular interest in respect to the history of scientific cooperation. Therefore, these exchanges represent the material footprint of how the theories are “thought” from objects and itineraries that are conditioned by the communication and the transportation of data and artefacts. The scientific exchanges of these objects and its contextualization also provide information on the relations between the actors and the interests involved.

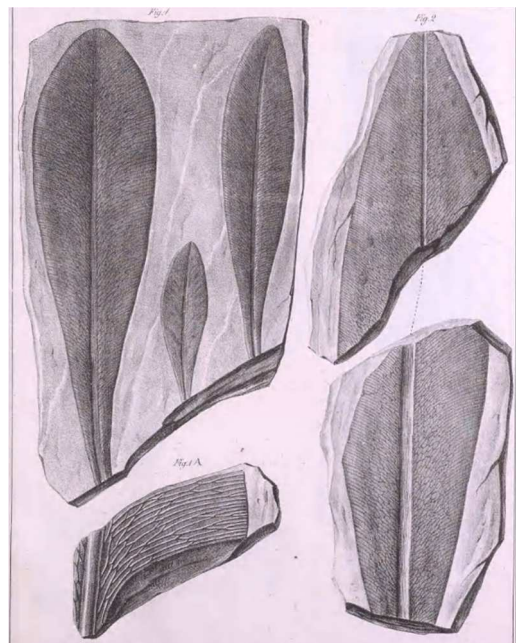


Fig. X. Schematic drawing of fossilized *Glossopteris* leaves, as described by the French Adolphe Brongniart in 1828, from specimens collected in India and Australia. Source :

Brongniart, A.T. (1828). *Histoire des Végétaux Fossiles, ou Recherches Botaniques et Géologiques. Sur les Végétaux Renfermés dans les Diverses Couches du Globe*. Tome Premier. Paris: G. Dufour et Ed. D'Ocagne.

Publications:

Waligora, M. F. 'Gondwana Coal and the *Glossopteris* in Brazil'. In: Bashford, A., Chakrabarti, P., Hore, J. (editors). *Gondwana/Land: Deep Time, Modern History, Southern Earth*. The University of Chicago Press. **In press.**

Waligora, M. F. The South Does Also Exist: The Continental Drift Debate in the Account of the South-African Paleobotanist Edna Plumstead. *Earth Sciences History*: 1-23.

Forthcoming.

Waligora M. F. (2020). Researchers following the *Glossopteris* trail: social context of the

debate surrounding the continental drift theory in Argentina in the early 20th century. *Colligo*, 3(3). <http://revue-colligo.fr/index.php/vol-3-num-3/2-uncategorised/45-203305>

Contact: Mariana Ferrari Waligora, Rua Bijari 138, 05579-040, São Paulo-SP, Brazil.

Email: marifwal@gmail.com