Presentation

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FERREIRA, L.F., REINHARD, K.J., and ARAÚJO, A., ed. Presentation. In: *Foundations of Paleoparasitology* [online]. Rio de Janeiro: Editora FIOCRUZ, 2014, pp. 21-23. ISBN: 978-85-7541-598-6. Available from: doi: [10.7476/9788575415986.0002](https://doi.org/10.7476/9788575415986.0002). Also available in ePUB from: <http://books.scielo.org/id/zngnn/epub/ferreira-9788575415986.epub>.

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Presentation

The following tale, attributed to one Ludovicus Tertinus Guanabarinus, circulates in the laboratories and corridors of Manguinhos (the campus of the Oswaldo Cruz Foundation in Rio de Janeiro).

Before setting off for war, Don Quixote stopped to visit the local tavern. There he met a young man, whom he asked:

“Is your name Sancho?”

“No,” replied the man. “My name is Quixote.”

Don Quixote found this rather odd, but proceeded:

“I am going to war and need a squire. Will you follow me?”

“Yes,” replied the other.

On their journey, they met another character who, oddly enough, was also named Quixote. He came from faraway lands. From Alaska, people said. And the three set out together to wage war for many long years. When they had grown old and could no longer go to war, they would sit in the tavern getting drunk, telling stories, and occasionally taking lecherous looks at the innkeeper's daughter with her generous bosom. One day Don Quixote remarked:

“I no longer remember how many wars we've won and how many we've lost.”

“Neither do I,” replied the other, and added:

“Nor do I remember if our wars were just or unjust.”

“It's true,” replied the third, and said:

“But I do remember how much fun we had fighting them.”

The tale is highly fitting for the study of paleoparasitology. For thirty years we've had a lot of fun. Otherwise we would never have proceeded with our research. We don't believe that suffering makes good dissertations. We don't

believe in the labor market. If you enjoy what you do, you do a good job and are therefore successful. In the words of old man Cândia (the uncle of our research colleague Arlindo Fábio), in his clipped gaucho accent: “Peleo porque me gusta pelear.” (“I fight because I love to fight.”).

The time had come to publish a synthesis of paleoparasitology, drawing on decades of extensive cooperation with our archaeologist colleagues, without whom none of this work would have been possible. When our laboratories joined forces to study archaeological remains, we launched a network that expanded and diversified in other countries. Data accumulated, and the time had come to define the state of the art.

The first section includes eight chapters, focusing on conceptual definitions of the parasitism phenomenon and analyses of aspects pertaining to the human host, especially humans’ dispersal around the planet and the parasites that accompanied prehistoric migrations. The section features the peopling of the Americas due to the importance of paleoparasitological findings for elucidating prehistoric migrations. As an example of collaborative research between anthropology, archaeology, and paleoparasitology, there is a chapter on Patagonia, with studies that complement each other to reconstruct prehistoric scenarios and the changes that occurred with the arrival of Europeans.

The second section includes chapters on parasites and their remains preserved in different materials, as well as the description of techniques to recover them and methods to study them. The section features materials which potentially contain parasites or their vectors, such as mineralized coprolites and those preserved by desiccation. Other materials such as amber mainly contain parasite vectors, such as sand flies (phlebotomines) and kissing bugs (triatomines), as well as food remains and various pollens, some of which indicating the use of medicinal herbs or traces of contacts between prehistoric human groups in the Americas and peoples from other continents.

The chapter on diagnosing the coprolite’s origin provides details on proper identification of the archaeological remains. The subsequent chapters discuss the diagnosis of helminths, protozoa, viruses, and bacteria, in addition to details on the presence of mites and ticks in ancient material. Molecular diagnosis is the subject of a specific chapter, adding to traditional techniques in microscopy and serology and adding reliability by contributing new approaches to paleoparasitology.

The third section includes data on parasite finds in a wide variety of materials from all the continents. The idea was to produce a paleogeographic study of parasitic infections in the past, showing their distribution with dates in given places where hosts were located, whether they were specific or occasional in maintaining the parasites’ life cycle. We began with the Americas, although Africa and Asia may have been the birthplace of many infections that eventually established themselves in the human species. The authors endeavored to demonstrate the possibility of in-depth studies based on archaeological knowledge. Whenever possible, as in the case of North America, South America, and Europe, the authors focused on the description of specific situations of prehistoric groups in certain regions, such as the Ancestral Puebloans in Arizona, the Fuegians in Patagonia, and the archaeological region of the Serra da Capivara National Park in Northeast Brazil.

In Asia, intensive work has been done in Korea and Japan, with the publication of articles aiming precisely to construct diversified knowledge in archaeology and anthropology together with paleoparasitology. Such exchange should become even more natural in the future, since paleoparasitology can only make progress with interdisciplinary collaboration.

Finally, the fourth section presents findings on one of the most interesting parasitic infections, Chagas disease, the discovery of which completed a hundred years in 2009. Various techniques have been used to study Chagas disease, but major strides have been made with molecular biology. Next, to illustrate the diversity of studies and their immense possibilities, a chapter focuses on potential revelations from historical documents and various difficulties

in their interpretation. To conclude the book, nothing could be more stimulating for future studies than to construct new perspectives and approaches that can result from the skill and imagination of students that are just getting started in the laboratory or are even still in secondary school. The Scientific Vocation Program, coordinated by the Joaquim Venâncio Polytechnic Health School (EPSJV) at the Oswaldo Cruz Foundation, seats secondary students next to experienced researchers in the laboratory in order to awaken their curiosity and develop their capacity to formulate questions and answer them with the appropriate methodology.

That was our goal with this book. We don't know whether it will please readers, so we quote barber-surgeon Luís Gomes Ferreira in his *Erário Mineral*, one of the first treatises on Brazilian medicine, published in 1735:

“If you should find some profit in your discovery, discount the good of such satisfaction from your pains and labors. And if it appears useless, make a better one, and give praise to God, who shared so much with you while giving so little to others.”

ACKNOWLEDGMENTS

We wish to thank our ever-faithful laboratory coworkers: Natalina, Marcus Vinicius, Benjamin (in memoriam), and Miguel (in memoriam).

Natalina, our eternal secretary, who knows everything in our laboratory, is indispensable. Benjamin and Miguel, always essential, were there with us taking the first steps in paleoparasitology. We owe many of the finds to them. Those times are past, but not forgotten.

Marcus Vinicius is now our factotum; we really need him. This team was crucial to the beginning of a new science.

We cannot forget our students, those that came to our laboratory for internships under the Scientific Vocation Program (EPSJV), science initiation program (Pibic/CNPq), Pro-Management Project (FIOCRUZ-FAPERJ), and Master's, PhD, and post-doctoral degrees. Their presence has always been stimulating and their questions pose beautiful challenges.

Many of the findings presented in this book have resulted from research projects funded by the National Council for Scientific and Technological Development (CNPq), the Coordinating Body for Funding Graduate Studies (Capes), with the cooperative agreements Capes-Cofecub (Comité Français d'Évaluation de la Coopération Universitaire avec le Brésil) and Capes-SECyT (Secretaría de Ciencia y Tecnología), involving Brazil-France and Brazil-Argentina, respectively, the Carlos Chagas Filho Rio de Janeiro State Research Foundation (FAPERJ); Fulbright Commission, and FIOCRUZ, with funds from the Program to Support Strategic Research (Papes). Part of the research was also funded by the National Institute of Science and Technology in Archaeology, Paleontology, and the Environment of the Semi-arid/ CNPq, to which four of the authors belong (including two of the editors).

The Editors