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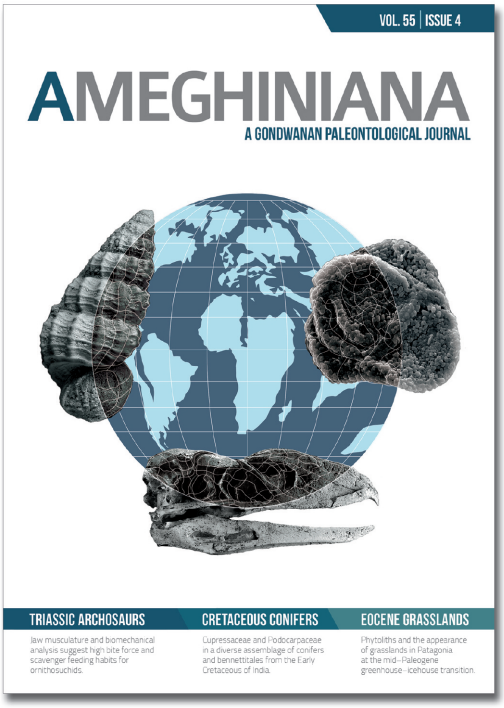

EL DARWINISMO DE AMEGHINO. UNA LECTURA DE FILOGENIA

Gustavo Caponi. NEL-Núcleo de Epistemología e Lógica, UFSC, 249 pp, ISBN 978-85-87253-32-3.9.

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The life and work of the Argentine paleontologist Florentino Ameghino (1854–1911) has been widely studied, especially his institutional role in the incipient Argentine national science. Also, his paleontological and stratigraphic publications and notes have been extensively analyzed. In general, Ameghino is seen more as a fossil descriptor than as a theoretician. Furthermore, some of his most famous theories have gone down in history as mere errors, lapses committed by a peripheral scientist from a peripheral country. Even in Argentina, not few know Ameghino only for his hypothesis—today ruled out—on the American origin of men.

Perhaps because of this, few works have addressed Ameghino's contribution to the evolutionary theory. On this issue, there are two aspects that one could consider: 1) the theoretical models and concepts he adopted, and 2) the novel contributions he provided, *i.e.*, to what extent he departed from the models of his time. Gustavo Caponi's book "El Darwinismo de Ameghino. Una lectura de Filogenia" addresses these two issues in depth, as they had been rarely explored.

Of course, in order to attend to the complex evolutionary thinking of Ameghino, it becomes necessary to have a vast knowledge of his work and, above all, of those in which such theoretical contributions are explicit. The most important theoretical work of Ameghino is, without doubt, *Filogenia* (1884), and it is precisely on this text that Caponi centered his excellent book.

Before writing his book on Ameghino's contribution to evolutionary thinking, Caponi was already in a privileged position in view of his professional profile, as a philosopher of science formed in evolutionary biology, and previous studies on the theoretical works of Georges Cuvier, Éttiene Geoffroy Saint-Hilaire, and Ernst Haeckel. It is precisely with those nineteenth-century morphologists that Caponi intellectually links Ameghino, to the point of calling him "El Cuvier argentino" or "El Haeckel de la paleontología".

From the very title of the book, Caponi recognizes Ameghino as a true Darwinist, as the paleontologist considered himself. But, no doubt, Ameghino was a Darwinian that adopted a wide vision, not only seleccionist explanations. Ameghino is a member of that first agenda of Darwinism, the phylogenetic program, and it is therefore not whether he speaks of natural selection or not what matters but his absolute coincidence with the objectives of such program. Ameghino, according to Caponi, clearly exposes the debts of the Darwinian phylogenetic program with respect to predarwinian traditions, particularly with Geoffroy and Cuvier, more than with Lamarck. These influences can clearly be seen in *Filogenia*.

Caponi comments that, after the publication of *On the Origin of the Species*, a new way of doing paleontology arose; that is, evolutionary paleontology. *Filogenia* intends to outline a program and develop a theoretical and methodological proposal for all of those evolutionary paleontologists that followed Darwin. As the author of the book explains, Ameghino fought not to impose evolutionism in his country, Argentina, as it is often misinterpreted, but to propose a phylogenetic way to do paleontology.

In the book, Caponi discusses the so-called phylogenetic laws of seriation, a fundamental conceptual tool in the work of the Argentine paleontologist. In addition, the author discussed the value that Ameghino gave to comparative embryology, and analyzed his position with respect to the biogenetics universal law of Haeckel.

Caponi questioned the relevance of Ameghino's neolamarckian positions, and pondered the extent to which those references could be understood as a departure from Darwin's postulates. About this, the author considers these neolamarckian expressions as secondary and lateral. We must remember that, Caponi insists, natural selection was not the only evolutionary mechanism accepted by Darwin, even though it was the most important one.

As regards the abovementioned claim, Caponi's book

discusses the real scope of the so-called "eclipse of Darwinism", or at least the validity of linking such eclipse to a particular scientist by the mere fact of not explicitly subscribing to natural selection, as it has often happened with Ameghino. In this way, Caponi thinks that, if there was an eclipse, it was a partial one; an eclipse that did not mean a substantial departure from Charles Darwin's postulates. Caponi understands that the eclipse is actually an intellectual construction of the architects of synthesis, who were more anxious to highlight their own theoretical contributions than to reflect what really happened.

Ameghino assimilated much of the philosophical and theoretical biology of his time. Caponi highlights several people who clearly influenced Ameghino: Cuvier, Geoffroy, and Haeckel. As regards Cuvier, Ameghino, according to Caponi, reelaborated his functional correlations of organs, which are always relative to genealogical links, in Darwinian terms. Many of Ameghino's observations with respect to the organization of living bodies in Filogenia present a cuvieran mark. As per Geoffroy, the philosopher, Caponi discusses how Ameghino used his theory of analogues, which proposes that all animals are made of the same elements, and his idea of unity of plan of all animals, which supposes, in addition, the principle of connections; that is, the notion that these elements are always connected in the same way. Ameghino explained the unit of type by common descent, as Darwin had done.

Ameghino's procedure of seriation, exposed in Filogenia, improves that of the correlations of Cuvier or the morphological constants of Geoffroy, according to Caponi. Seriation would enable the phylogenetical ordering of those species that had been reconstructed on the principles of those two French morphologists. Employing these laws, it would be possible, with mathematical rigor, to rebuild the transitions between two known forms. That is the main contribution of Filogenia, says Caponi.

In sum, "El Darwinismo de Ameghino. Una lectura de Filogenia" of Gustavo Caponi is a fundamental book, an obligatory reading for anyone interested in the work of Florentino Ameghino and those who wish to learn about the main debates that animated evolutionary Paleontology in the late 19th century.

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