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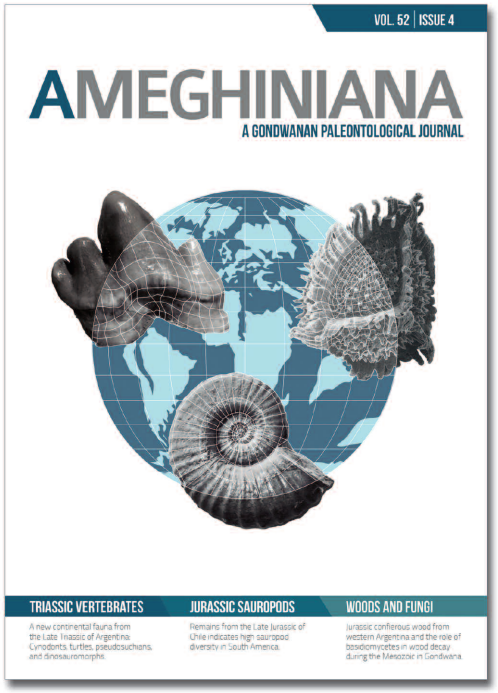
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ISSUES IN PALAEOBIOLOGY: A GLOBAL VIEW

Marcelo R. Sánchez-Villagra and Norman MacLeod (Eds.). 2014, 289 p. Scidinge Hall Verlag, Zürich, Switzerland, ISBN 978-3-905923-17-9

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ISSUES IN PALAEOBIOLOGY: A GLOBAL VIEW. *Marcelo R. Sánchez-Villagra and Norman MacLeod (Eds.).* 2014, 289 p. Scidinge Hall Verlag, Zürich, Switzerland, ISBN 978-3-905923-17-9.

In 1889, under the name of E. R. C., an anonymous author, while reviewing a book of Melchior Neumayer (1845-1890) expressed the following: "The paleontologist has been defined as a variety of naturalist who poses among geologists as one learned in zoology, and among zoologist as one learned in geology, whilst in reality his skills in both sciences is diminutive" (p. 259).

While one, as a paleontologist, may feel that the sentence is a bit irreverent, at least we should admit that paleontologists –and paleontology– have lived permanently in a sort of identity crisis, because of their changing position between two major disciplines that are in principle quite different: geology and biology.

If paleontology has had problems of identity since the nineteenth century, no less has been the case of paleobiology, the discipline that aims to study life in the past. According to David Lazarus "Palaeobiology's original goal was to (re)integrate palaeontology with biology, based on the perception in the early 1960s that palaeontology had degenerated into a marginal service specialty for geology" (p.71). To correct this situation, paleontology began moving towards biology since the 60's, but during this period biology shifted its focus to molecular approaches, so that paleobiology remained marginal to most biological research, at least in the perception of many biologists.

Always according to the perception of Lazarus, this movement of paleontological research towards biology caused a departure from geology, to the point that many lines of research in paleobiology seem to be, even nowadays, absolutely disconnected from the geological context. This is especially true in some research programs on fossil vertebrates, especially in phylogenetic studies (p. 72), which on the other hand are often not accepted in journals such as, precisely, *Paleobiology* (in fact, Lazarus claims that if the broad definition of paleobiology is accepted, systematic studies of fossil organisms must be considered part of paleobiology).

However, other disciplines included in traditional paleontology would be definitively outside of paleobiology. Paleobiologists can be even people who have not been trained in important areas of traditional paleontology, such as taxonomy, biostratigraphy, sedimentology, and geochemistry; thus, every paleobiologist is a paleontologist, but the opposite may not be true.

At present, paleobiology embraces different lines and research programs: paleoecology, biomechanics, paleohistology, etc. These fields seem to be often separated from each other; in this sense, the integration is becoming increasingly more necessary, and in fact, that seems to be happening. Although the term paleobiology (or palaeobiology) is old (it corresponds to Othenio Abel in 1912, Sánchez-Villagra and MacLeod, 2014, p. 37), the *boom* of paleobiological studies occurred in the 70's with Stephen Gould, David Raup, Steven Stanley, and others.

The book by Marcelo R. Sánchez-Villagra and Norman MacLeod "Issues in palaeobiology: a Global View" aims at introducing the reader the most relevant problems of current paleobiological research. It consists of a series of interviews made to 22 researchers (including the two editors) who define themselves as paleobiologists. These interviews reveal different interests, different backgrounds, and different approaches.

Why interviews? Marcelo Sanchez Villagra himself gives us the answer: interviews are an enjoyable way to understand the ideas and modes of work of authors in areas outsides our own professions (p. 11). The paleobiologists interviewed are Marcelle BouDagher-Fadel, Kevin Boyce, Anusuya Chinsamy-Turan, Francisco J. Goin, Da-yong Jiang, Michael Hautmann, Christine M. Janis, Carlos Jaramillo, Jukka Jernvall, Dieter Korn, David Lazarus, Michael Lee, Zhe-Xi Luo, Bruce J. MacFadden, Jennifer McElwain, David Polly, Louise Roth, Jest Rust, Hesham M. Sallam, and Sergio F. Vizcaíno. Of course, this selection is arbitrary, but it is sufficiently representative, and clearly shows the main trends in

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current paleobiology.

The people interviewed have different personal stories and educational backgrounds, as they were born in different countries under different political scenarios. In spite of this, they can be grouped in three major areas of paleobiology: paleoecology, functional morphology and biomechanics, and systematics (p. 260–261). The subjects covered by the interviewed researchers are in fact varied, which gives a glimpse on the broad scope of paleobiological research: they go from the studies of planktonic foraminifera (Marcelle Bou Dagher-Fadel) to correlating form and function in mammals (Sergio Vizcaino).

The questions posed to the interviewed were the following:

1- What are the most important problems in paleobiology?

2- Which is the most fundamental issue of paleobiology and evolution that your work addresses?

3- How could continuation or an expansion or of your research program lead to new insights or open new questions in paleobiology?

4- What do you see as the most interesting criticism against your position in discussions about paleobiology and evolution?

5- Why were you initially drawn to research in paleobiology?

The answers to these questions were varied, and clearly mark the different directions that paleobiology is currently taking. In this sense, reading "Issues in Palaeobiology" is a good way to get to know the current research programs by these paleobiologists, their main results, as well as to think about the foundations and the scope of a discipline that has been gaining an increasing number of followers.

Many of the answers provided by the interviewed researchers reflect the tensions we mentioned above. Several of them complain that the taxonomic studies have declined (Korn, Polly), although this does not seem to be true for Argentina and China, at least in the perception of the editors (p. 264). Korn is even willing to admit the criticism that paleobiological studies have grown at the expense of others, more aligned with traditional paleontology, which has resulted in the fact that traditional descriptive works are not sufficiently cited (p. 67).

An aspect that is not always treated in technical books is the personal biography of the scientists. The format of interviews chosen by Sánchez-Villagra and MacLeod allows such a treatment. In his answer of how was the initial contact with paleobiology (question number five), MacLeod classified their colleagues in two categories: those who collected fossils as children and never considered any other profession for their life's work, and those who stumbled across paleontology later in life by accident (p. 232). Some of the interviewed fitted in the first category (at least they showed an early vocation towards biology or paleobiology): Lazarus, Hautmann, Lee. Included are here some examples of child fascination by dinosaurs, such as MacFadden and Polly. Others, as MacLeod himself, are instead "accidental paleontologists".

Summarizing, this book by Sánchez Villagra and MacLeod is highly recommendable because it exposes the views that each of the interviewed specialists have on their own line of work, the links that their research has with other fields, and the direction in which paleobiology is currently moving.

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