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Editorial

The Role of Paleontology in the "Electronic Era"

Some 27± electronic journals principally related to paleontological research can be noted on the internet. Many of these journals need usernames and passwords to get their full texts. Do paleontologists think this number sufficient for saying that paleontology as a science is still robustly standing within other sciences in the 21st century!!

Of course, there are other classical plaeontological journals that started to make their articles available online, even though these journals are not available without subscriptions.

In my vision, either you search for gain or offering knowledge to everybody. Some journals need sponsors to do that service; some others gain money from subscriptions. In both cases, the reader is interested to get the information free of charge; though he is obliged to pay for that. Nonetheless, it is not a special case related to paleontological e-journals but I am trying to motivate our thought for finding solutions that could be helpful to all scientific publishers.

First of all, I found many of the e-journals in the field of paleontology are focusing on vertebrate paleontology (for example: Palaeontologia Electronica as one of the important and successful e-journals in the field; Elewa 2007). I do not find reason for that situation, unless the invertebrate paleontologists either prefer classical publications, I doubt; or there is a pronounced unbalance in electronic publications of paleontologists who are working on vertebrates when compared to electronic publications of those who are working on invertebrates, with positive significance towards vertebrate research. It is also possible that most founders and executive editors of these paleontological e-journals are biased towards vertebrate paleontological research. Surprisingly, when you search for paleontology on the internet you will find several sites focusing on vertebrates, while the sites referring to invertebrates are less common. Even when you speak on paleontology to the public, their attention goes toward dinosaurs (the celebrated vertebrates of the fossil record).

Consequently, we should find means to fill the gap in electronic publications between these two major fields of paleontology.

On the other hand, we cannot ignore paleobotany and the existence of fossil plants, though this group is facing same problem as invertebrates.

Anyway, let's say that there is no problem, and this situation is subject to change according to the needs of the scientific community.

Then, the second point of view is that paleontology itself has to be more effective to attract the public. There are, indeed, some ways to do that; one of these ways, in my opinion, is to design robotic machines capable to attract attention of the public. This is already made through the designed 10-pound, two-legged robotic replica of a Troodon from the Cretaceous period; she is called "Troody" and walks like the real dinosaur (see the article by Harald Franzen at: http://www.scientificamerican.com/article.cfm?id=walking-the-dinosaur; July 9, 2001). Once again, this idea is also based on vertebrate paleontology.

On Tuesday, 7 October 2008, Sankar Chatterjee declared (during the 2008 Joint Meeting of the Geological Society of America, Soil Science Society of America-American Society of Agronomy-Crop Science Society of America, and Gulf Coast Association of Geological Societies, Houston, Texas) that through bio-inspiration paleontologists can design robots that show promise to develop unmanned aerial vehicles (UAV) of much superior range, a sensor platform capable of aerial, terrestrial, and aquatic locomotion. He focused his talk on *Tapejara wellnhoferi*, a pterodactyloid from the Early Cretaceous of Brazil (for more details visit the following two sites: http://esciencenews.com/articles/2008/10/02/pterodactyl.inspired.robot.master.air.ground.and.sea; http://a-c-s.confex.com/crops/2008am/webprogram/Paper47647.html). It seems real that the robots are coming! As Alexander Stoytchev said (visit the following site for details: http://esciencenews.com/articles/2009/01/29/the.robots.are.coming).

I hope designers can think of developing robots to represent extinct invertebrates like trilobites; I am sure the idea will attract the public. Even Hollywood can make action movies using these invertebrate robots.

Regarding another point of interest, it appears that some new paleontological e-journals started to modify the normal system of the peer-reviewed journals, in which the reader can positively or negatively comment online on the published article. Accordingly the editors of the e-journal, with permission from the author(s), make the needed corrections to the article.

This process may have some advantages, like the benefit from positive comments to improve the subject, and the interaction between the authors and the public. Yet, there are serious disadvantages related to citation of this article. Presume you cited this electronic article with information that was later corrected by the e-journal, what will you do? This step may disturb the idea of your paper. Also, there is the danger that may come from illegal changing of these electronically published materials by unauthorized persons.

Therefore, paleontologists ought to support the progress in the field of electronic publication, just with care to benefit from the advantages and to prevent or at least reduce the disadvantages.

In fact, paleontologists are supposed to continuously search for new scientific methods and technologies. They should try more and more to import modern technologies to our field of research. I am sure our dreams could be achievable; just we unify our efforts to enhance paleontology to be one of the most attractive sciences of the 21st century.

Reference

Elewa AMT (2007). A Powerful Electronic Journal in the New Millennium. Palaeontologia Electronica, 10 (1; 2A): 2 pp.

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