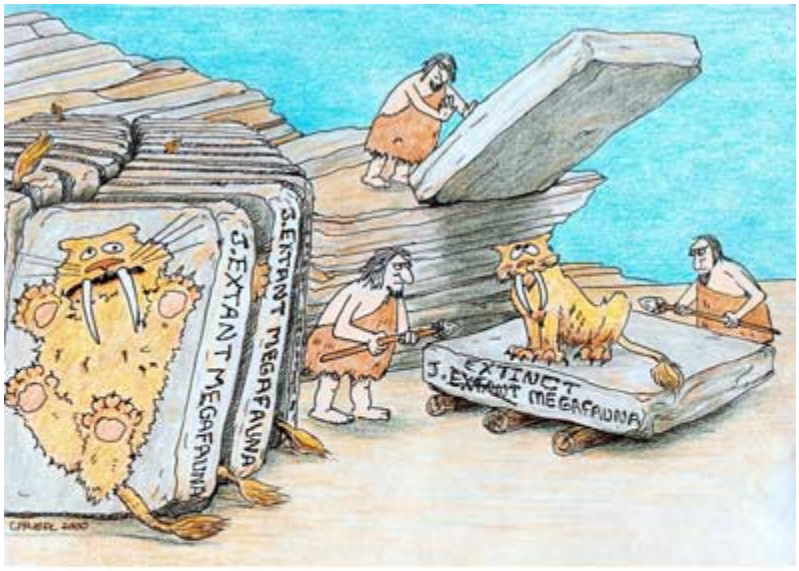
Palaeontologia Electronica
http://palaeo-electronica.org/

THE SECRET TO A LONG LIFE

R. Timothy Patterson



New research suggests that extinction of Late Quaternary large mammals may have been related to an early ICZN requirement recommending distribution of a reasonable number of syntypes of each newly described taxon.

With the release of this issue, **Palaeontologia Electronica** (**PE**) will have completed three years of publication. Paleontologia Electronica has come a long way since its first conception as a series of discussion threads on PaleoNet in 1995 and later brain-storming on the Electronic Paleontological Journal listserver in 1995–1997. With the completion of this volume, two founding members of **PE** will be stepping down. Bill Riedel, after a long and successful career at Scripps Institution of Oceanography in La Jolla, California is retiring to the vineyards of his native Barossa Valley in South Australia. On behalf of the entire **PE** publication team, I would like to thank Bill for his untiring service. I am the other "retiree". Although I am not ready to hang up my professional hat yet, with **PE** hitting its stride it is time for me to pursue other endeavors. As Michelle Shocked noted in her 1986 "Texas Campfire tapes", the "Secret to a Long Life (is knowing when it's time to go)". I would like to thank all of those in the **PE** family for making my term as one of the two Executive Editors a great experience. In particular, I would like to thank our Technical Editor Jennifer Rumford. Despite sharing several e-mails a day and phone calls too numerous to count, Jennifer and I have never met in person—a testament to the power and utility of the Internet as a publishing environment.

We are delighted to announce that **PE** will be digitally archived in the National Library of Canada (NLC). The NLC electronic collection incorporates formally published Canadian online books and journals. Although international in nature, **PE** qualified for inclusion in the NLC digital archive through its mirror site at Carleton University, Ottawa, and sponsorship of the journal by the Canadian Association of Palynologists. Publications are being acquired, catalogued, and permanently stored at the NLC in two ways. The original publication documents are permanently archived both by maintaining legacy computer systems and browsers, and by migrating software contained in electronic publications to new computer systems when required. Public access is provided on the Internet through

Patterson, R. Timothy. 2000. The Secret to a Long Life. **Palaeontologia Electronica,** vol. 3, issue 2, editorial. 1: 4pp., 181KB.
http://palaeo-electronica.org/toc.htm

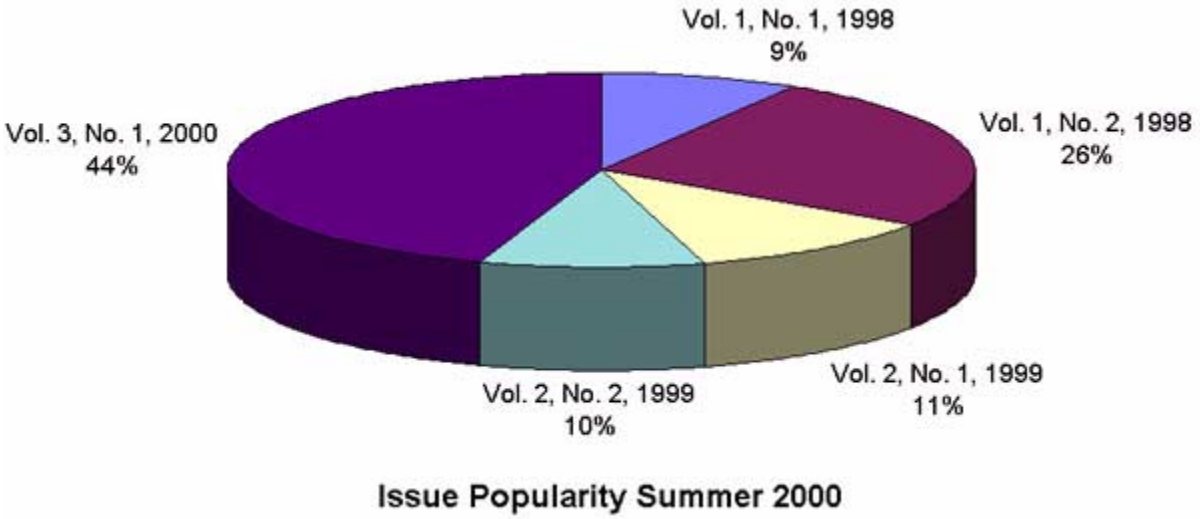


Figure 1. Issue popularity for PE.

the World Wide Web. This initiative, and others like it, by organizations such as the Library of Congress in the United States, is of great significance to the future of electronic publications. With the establishment of these facilities, the perceived ephemeral nature of the WWW is no longer an issue. These great libraries will ensure that content of these journals remains unchanged and, more importantly, widely available to the global community in perpetuity.

Readership of **PE** continues to be strong and very international in nature. One statistic that is only revealing itself now is that back issues have strong staying power with our readership. The accompanying graph (Figure 1) shows the popularity of each issue during the period from April to August of this year at two of our mirror sites, Carleton University and the Texas A&M University home site. As expected, these data show that peak access numbers occur immediately following release of an issue, but that readership of previous issues remains high. In this survey, the last issue (v. 3.1) accounted for 44% of the hits, while the previous issues collectively account for 56%.

With these changes it seems like a good time to reflect on where **PE** stands with regard to the paleontological community. **Palaeontologia Electronica** continues to be unique among its earth science peers. Since we are not merely publishing an electronic version of a print journal we can–and do–take full advantage of technologies available on the World Wide Web (WWW), permitting authors to use new digital technologies to enhance the interpretation and communication of their paleontological research results.For example, in this issue Dave Scott et al. (this issue) publish a lavishly illustrated color atlas of Japanese Neogene foraminifera presenting the fossils as they actually appear in reflected light (Figure 2). This article would have been very expensive to publish as a traditional publication.

Figure 2. Haplophragmoides hatai Takayanagi n. sp. from Dave Scott et al., 2000.

In addition, Pat Lyons et al. (this issue) present a full three-dimensional laser-scanned color rendering of a tylosaur skull bone (Figure 3) that can be manipulated. Instead of using three or four gray-scale views of a bone (as one would do in a print article) this technology allows researchers

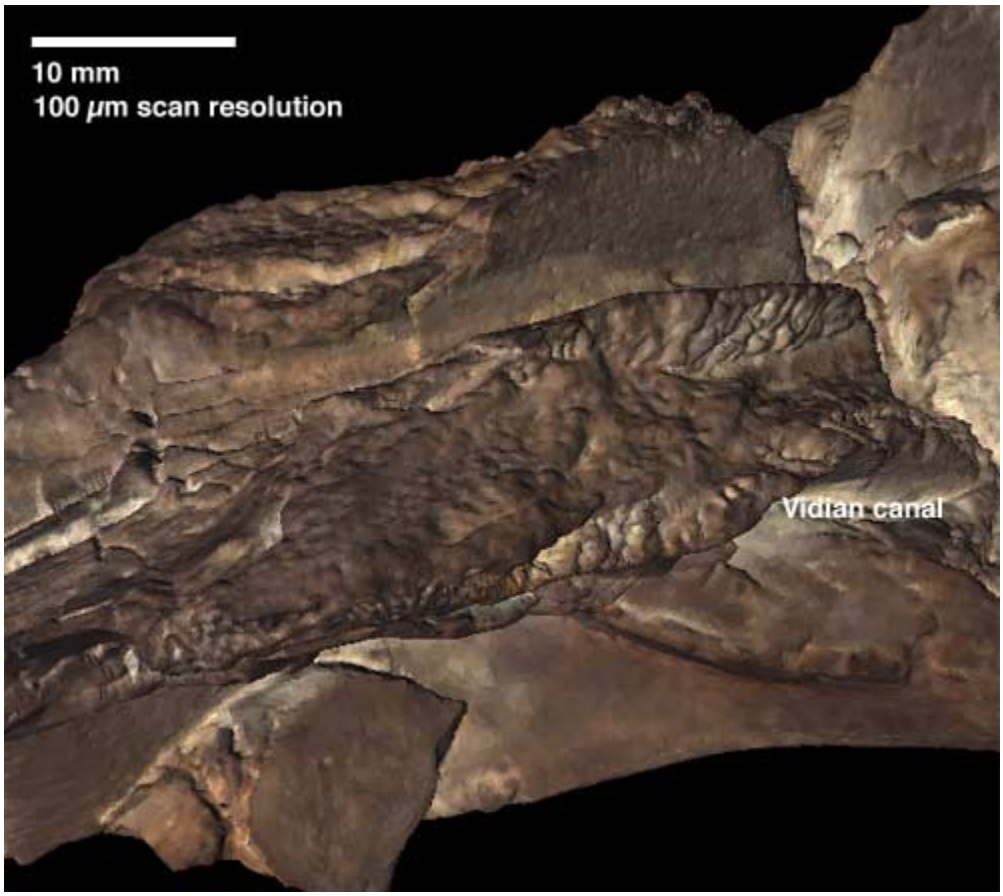


Figure 3. A laser-scanned color rendering of a tylosaur skull bone from Lyons et al. 2000.

to look at the bone from any angle and at magnifications resolvable to 50 µm. Although use of new technologies is certainly not a prerequisite for publishing in **PE**, every issue so far has included applications of new methods.

Palaeontologia Electronica breaks further new ground with its first published description of new taxa. Yokichi Takayanagi describes three new foraminiferal taxa in the article by Dave Scott et al., on Japanese Neogene foraminifera. This sets a precedent for others to take advantage of the unique illustrative and descriptive tools that are available only in the digital realm. However, the (1999) Fourth Edition of the International Code of Zoological Nomenclature (ICZN) still makes authors and editors jump through a few hoops in order to validate taxonomic names introduced in electronic media. Although the international body that administers the distribution of International Standard Serial Numbers (ISSN) is convinced that publication on the WWW is real, the panel responsible for developing the ICZN is still unsure. To be fair, the ICZN panel's main worry is the ephemeral nature of the WWW. However, with the appearance of digital library archives like that of the NLC, dedicated to permanently preserving electronic journals online, these fears seem to be unfounded. Let's examine the wording of the ICZN as it relates to electronic publication.

Under Article 8, "What constitutes published work," Section 8.6 states that "for a work produced after 1999 by a method that does not employ printing on paper to be accepted as published within the meaning of the Code, it must contain a statement that copies (in the form in which it is published) have been deposited in at least 5 major publicly accessible libraries which are identified by name in the work itself". That would seem to suggest that the ICZN is accepting electronic publication.

However, as one reads in Recommendation 8B, "Desirability of works on paper", "authors and publishers are strongly urged to ensure that a new scientific name or nomenclatural act is first published in a work printed on paper." It must be emphasized that this is a recommendation only.

Then Article 9, "What does not constitute a published work", contains Section 9.8 which lists "text or illustrations distributed by means of electronic signals (e.g., by means of the World Wide Web)" as not constituting a published work. What does this mean to the paleontological taxonomist who wants to take full advantage of new digital technologies? It is clear that the authors of the ICZN document were wary of electronic publishing. However, their primary concern is a different one; the permanence of the published record. A taxonomic work existing only on the WWW can be easily altered or removed after its publication. Although this is a legitimate concern, the ICZN leaves the back door open by the proviso in Article 8.1.3 that "it must have been produced in an edition containing simultaneously obtainable copies by a method that assures numerous identical and durable copies."

Thus, new taxonomic names or taxonomic actions distributed electronically can be validated provided that permanent copies of the work are placed in at least five named repositories and also made available to the scientific community. We will meet this requirement by pressing and distributing a sufficient quantity of an exact copy of the WWW version of **PE** on compact disks (CD) in archive-quality, read-only format. There will be no confusion as to publication dates, as the CD copies of **PE** will be mailed on the day that the WWW version of the journal is made public. Because the CD version will be identical to the WWW one, citation of any page or figure number viewed on line will be consistent with the archived version. The reader just has to be aware that the WWW version and the CD version have different ISSN numbers.

Those wishing to purchase a CD version containing the first three volumes of **PE**, particularly useful for those with slow Internet connections, may do so from the CD Sales page in this issue.

Electronic media are rapidly gaining ground as one of the primary means for disseminating scientific and other information. It may not be too many years before print journals have largely disappeared. Some institutional libraries, like the ones here at Carleton University, are forging ahead with plans to become increasingly electronic. The 1999 Fourth Edition of the ICZN, the first revision of the Code since 1985, has only presented a stopgap measure vis-à-vis electronic publication of new taxonomic names. The move to electronic publication is accelerating. When **PE** published its first issue in 1998, it created quite a stir in the serial-librarians community when it was chosen to be the 5,000th electronic journal to be listed on the Internet listserver NewJour. Although not all of those journals were as scholarly as **PE**, the number of electronic journals has continued to grow. It seems only a matter of time until issues of costs, efficiency, and convenience have compelled most journals to migrate to the web. When the other paleontological journals make the leap, **Palaeontologia Electronica** will be waiting to welcome them to the brave new world of electronic publishing.

With the development of major national digital archives in countries like Canada and the United States, dedicated to preserving online journals in their original form, large portions of ICZN Articles 8 and 9 are becoming inadequate less than a year after the release of the latest edition of the Code. As journal migration to the WWW is accelerating, my own strong recommendation to the ICZN panel is not to wait 14 years for the next revision of the Code!

November 2000
http://palaeo-electronic.org