EARTH SCIENCES HISTORY

JOURNAL OF THE HISTORY OF THE EARTH SCIENCES SOCIETY

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Rocker boxes. Note the use of women and children to process gold bearing ore. Source: Porte Crayon [David Hunter Strother], "North Carolina Illustrated: The Gold Region" (1857).

EARTH SCIENCES HISTORY

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EDITORIAL

RETRIEVING HISTORICAL DATA, GOLD DIGGING, BONPLAND'S CURIOUS CAREER, AND THE BRITISH ASSOCIATION DOWN UNDER

Gregory A. Good

Gretchen Luepke Bynum is retiring as Book Review Editor. She has provided a great service to the History of the Earth Sciences Society and a continuity to the journal while the position of Editor changed several times. We all owe her our thanks for years of hard work. Good luck in your future endeavors! Gretchen's good-bye note follows this editorial. With the next issue, Vic Baker will take over the very important role of keeping our members informed of the latest books in the history of the geosciences.

This issue introduces the new feature discussed in a previous editorial, the Éloge. The first Éloge is sadly of John Sinkankas, well known to many members of our society. As recently as 2000 he published an article in **EARTH SCIENCES HISTORY**. Si Frazier remembers him in warm detail. Éloges of other prominent contributors to the history of the geosciences are currently being prepared. Remember that Éloges will be managed by a committee chaired by the Past President.

Please allow a tardy note of celebration. The year 2002 has absorbed a tremendous amount of editorial energy. Between producing four issues and chasing them through the press process, appointing and initiating a new, thirteen-member, international board of associate editors, and working on the index of the first twenty-some years of the journal, I neglected to note that important fact: **EARTH SCIENCES HISTORY** and the History of the Earth Sciences Society are now twenty years old and going strong! The journal and society have not just survived, they are thriving. And with this issue, we look forward to a bright future. My personal thanks to Gerry Friedman and Mott Greene, the two editors who preceded me and without whom the journal would never have reached my hands.

A little more reflection is needed first, however, on the origin of HESS and its journal. When Gerald Friedman and a close band of colleagues started out, they were told they would fail within a few years. The society instead has grown to include over four hundred members and institutional subscribers.

The early days of the society were closely associated with historically minded geologists, primarily members of the Geological Society of America. The society always, however, included members from many countries, other sciences, and also from history and philosophy of science. Today HESS continues a close association with the GSA's History of Geology Division, in 2001 becoming an Affiliated Society of the GSA. We are also, however, reaching out to societies representing other disciplines and to international organizations. Our new editorial board symbolizes this effort.

The current condition of the journal both reflects our past and pre-sages our future. In volumes 19, 20, and 21 we have published twenty-five articles and research notes. Of these, eight have focused on history of geology, six on history of oceanography, five on history of paleontology, two each on history of geophysics and mining, and two each on history of petrology and climatology. I invite prospective authors to continue this widening scope to historical treatments of all the sciences of the Earth. Moreover, we have always included articles by both historians and historically minded geoscientists. In volumes 19 through 21,

twenty-two authors were scientists and nine were historians. This mix is healthy and should continue.

The future of HESS and EARTH SCIENCES HISTORY hold bright prospects. As the Treasurer's Report at the end of this issue reflects, careful management has put us on a track of fiscal security. Despite rising costs for printing and postage, we have been able to build an "escrow" account to assure our ability to weather unforeseen circumstances. As the back cover indicates, the journal has a wonderful selection of articles in preparation for the next few issues.

With the fiscal and scholarly condition of the journal assured, we can look forward to one major change in editorial procedure in the next year or so. The digital age is sweeping us up. Since I began editing **ESH** in 1998, we have moved steadily from paper-based procedures toward greater use of e-mail, our website, and digital transfer. Today I send one CD to the publisher, whereas I formerly sent dozens of floppy disks for each issue, plus all of the paper. Before my term as editor ends with volume 23 in 2004, I anticipate that submissions, referees' reports, and all revisions will be accomplished via a web-based system. We will continue to print a bound, paper-based journal, but by moving to web-based production we will greatly simplify and expedite publication, especially for members beyond North America. Indeed, because the mails and couriers will become unnecessary, this move will allow the next editor to reside anywhere on Earth! And by providing a web-based version of the journal, we will greatly enlarge our potential readership. We are currently pursuing this exciting project with our publisher and an "aggregate" of geoscience societies.

Another exciting prospect that I am frankly advocating is that HESS move beyond the primary function of publishing the journal. HESS has always cosponsored sessions at the conferences of other organizations. HESS has also sponsored meetings, especially under Gerry Friedman's direction, in Troy, New York. Now, however, we should consider a new kind of HESS conference. We should look toward organizing conferences that reflect and serve both the broad interests of our members and their international distribution. Annual meetings would be unreasonable, but perhaps a three-year cycle or four-year cycle is not. If meetings shift from Europe to the Americas to other locations, we will better serve our global constituency. If these conferences schedule sessions over a broadly interdisciplinary front, we will better advance and integrate the history of the earth sciences. I hope such general membership meetings come to be. I think back to the 1994 GSA Penrose Conference, "Insiders and Outsiders," which brought together scientists and historians interested in geology, oceanography, and meteorology. The invigorating effect of this conference helped spur on the increase of publication in history of the geosciences of the last decade. HESS should play such a role in the future.

The articles in this issue encourage my hopes for such a bright future. All but one of the articles in this issue are by scholars outside the United States. Two German scholars, one from Argentina, and two from Australia bring a particularly global dimension to this issue. The article by Elizabeth Hines and Michael S. Smith examines the development of gold-mining knowledge and techniques in the American South (Georgia and the Carolinas) in the early nineteenth century, i.e., pre-dating the famous 1849 California Gold Rush and subsequent ones in Australia and elsewhere.

Eduardo G. Ottone provides a detailed account of what happened to Aimé Bonpland after his famous expedition with Alexander von Humboldt. He tells the story of Bonpland's later life in Argentina and his paleontological research there. C. Rowl Twidale and Jennie A. Bourne next take us to Australia and the group of geologists who met as part of the 1914 meeting there of the British Association for the Advancement of Science.

Editorial

Lastly, two research notes bring us back to the consideration of the treatment of historical, geo-scientific data. Wilfried Schröder reviews the nature of the information that was available after the 1884 eruption of Krakatoa and Günter Buntebarth examines the nature of data collected on sub-surface temperatures between the seventeenth and early twentieth centuries. Dr. Buntebarth argues that it is equally important to know the history of the studies of the temperature of the Earth's interior as it is to know the history of climate studies. I am especially pleased that so many articles in this issue continue to broaden the range of topics considered by the journal.

I also thank Patricia Bobeck of Geotechnical Translations, of Austin, Texas. Ms. Bobeck generously donated her services in checking the translations of some of the primary source material in Professor Ottone's article. As **EARTH SCIENCES HISTORY** becomes more international, the help of our members and other scholars with translations will contribute to the continuing quality of the journal.

The long-awaited cumulative indexes to the journal will appear in volume 22. These indexes will cover all twenty-two volumes and will include some additional, useful ways to navigate through all of the material the journal has published.

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CHANGING OF THE GUARD: A NEW BOOK REVIEW EDITOR

GRETCHEN LUEPKE BYNUM

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I will be stepping down at the end of 2002 as the book review editor for **EARTH SCIENCES HISTORY.** Dr. Victor Baker of the University of Arizona (my alma mater) will take over in this position in the spring 2003 issue, that is, volume 22. He brings to the job a broad appreciation of the earth sciences as well as a keen understanding of the history and philosophy of science.

When Ellis Yochelson, the first EARTH SCIENCES HISTORY book review editor, desired to step down at the end of 1988, he asked me if I would be interested in taking over. I had never been an editor in any journal. Thanks for the opportunity, Ellis. This has been a fantastic educational experience.

Since my start in 1989, I have been privileged to work with three outstanding editors: Gerry Friedman (Founding Editor), Mott Greene, and Greg Good, all of whom also contributed book reviews during my tenure. My thanks to all of them for their help and encouragement. I also thank treasurers Dorothy Sack and Ed Rogers, who helped me with out-of-pocket expenses when I began performing my reviewing activities from my residence (but that's another story).

I further thank all of my many faithful book review contributors. Some volunteered to do reviews without being asked (a true blessing to all book review editors). And I thank the many others who graciously accepted their assignments. May I also take this opportunity to encourage all members in the Society to contribute a review at some time; you do get a free book!

Having said that, I am also quite aware that book reviewing is not given much, if any, credit in anyone's list of professional activities. Yet book reviews are vital to the scientific and historical research communities. I therefore plead with those in charge to give at least some credit to book reviews as a community service.

I hope to continue as a reviewer, but now it is time to complete a project I started in 1991: the history of the marine geology program at the U.S. Geological Survey.

Please join me in welcoming Vic Baker, who I know will take the book review section to new heights. His contact information is on the inside front cover.

LETTER TO THE EDITOR

Dear Editor:1

Thank you for publishing my reply to Bill Sarjeant's remarkably imprecise review of *Gideon Mantell and the Discovery of Dinosaurs* (1999). Anyone interested in an evaluation of either side should read my book, his review of it, and the two replies. In his latest (EARTH SCIENCES HISTORY, 2001, 20:5–7), Sarjeant does alleged "friends" no favors by attributing childish emotions to them. I cited Charig (1979) as a clear and well-informed statement that no valid proof of dinosaurian unity was available in Mantell's lifetime or for years afterward. As my book specifically states, I deal throughout with knowledge as it was during the second quarter of the nineteenth century.

Sarjeant newly disputes a couple of my introductory statements regarding vertebrate paleontology, a field he teaches. He's probably right that ichthyosaurs and plesiosaurs in the Upper Jurassic were no longer eating "bivalves" (my word), though their ancestors may have.

In claiming that "Pterodactylus was the size of a sparrow," however, Sarjeant has no point at all. According to *The Illustrated Encyclopedia of Prehistoric Flying Reptiles*, by Dr. Peter Wellnhofer (an expert), fossilized *Pterodactylus* specimens have wingspans of between fourteen and ninety-eight inches (p. 87). Either end of that range beats any sparrow that *I* have ever seen. The other pterosaur most common in the Upper Jurassic was *Rhamphorrhynchus*, which had wingspans of sixteen to sixty-nine inches. *Protoavis*, the one-time oldest bird, was only crow-size. Perhaps that's what Sarjeant was thinking of.

As to his silly fussing about the Weald as a valley, it was called that by Mantell, Lyell, and Murchison, which pretty well ends the matter.

Dennis R. Dean

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Wellnhofer, Peter, *The Illustrated Encyclopedia of Prehistoric Flying Reptiles*, (New York: Barnes and Noble, 1991). For pteradon flight, see pp. 153–155.

¹ Editor's note: This letter was received before the death of William A. S. Sarjeant in the summer of 2002, but he was unable to answer it. Dennis Dean requested that it still be published. An éloge of Professor Sarjeant will be published in an upcoming issue.

ÉLOGE DR. JOHN SINKANKAS (1915–2002)

SI FRAZIER

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It is a massive understatement to say that we will all greatly miss him. John was many things, as Jay Lininger pointed out in a wonderful article: Highlights from the life and times of John Sinkankas (*Matrix*, Winter 2000). "Looking back over the years, Sinkankas could reflect on a long list of job descriptions: pilot, military officer, world traveler, author, artist, lapidarist, historian, field collector, scholar and antiquarian book dealer." We could add: master book restorer, linguist, enthralling lecturer, mentor, and generous advisor to many aspiring authors in our field. John's generosity of his time and knowledge was huge. He was always ready to make himself, his knowledge, his files, and even his library available in any way he could if it would help to improve the gem and mineral literature. He was even very generous of his time and knowledge to those who technically were competitors to his and Marge's outstanding antiquarian book business, Peri Lithon.

John was a true Renaissance Man who very successfully exercised amazing skills and talent in writing, research, leadership, editing, as well as artistry in gems, jewelry, lapidary, and illustration. We do not have time nor space here to even begin to talk about his importance or the many services he rendered to the word of gems and minerals. His writings, of course, are extensive and every one of his publications is of enduring value with the possible exception of one. He once showed us a mimeographed set of instructions on flying a WWII era seaplane, a subject which fortunately is not one of our hot subjects. John said that of all his works this was the one of which he was proudest. In the very early days of WWII, John, who had been flying seaplanes for only a few years, was transferred to Pensacola, Florida. There he was appointed commanding officer of the patrol seaplane training squadron. This must have been a very heavy responsibility for the young officer. Incredibly he found that there was no training manual! Information had been passed on verbally from experienced pilots to neophytes. John immediately sat down to correct this situation and wrote out a manual which in the custom of the times was mimeographed. What has stuck in our minds was John's comment that it was absolutely essential that the instruction went clearly from a to b to c to d to e-and not leave out one step, or have a step out of place or the consequences might be that the seaplane might not come back. He said this influenced his approach to writing more than anything else.

We have all of John's other books, but we would trade almost anything for a copy of that seaplane manual. We are sure most copies have been discarded or have decomposed but having just read a history of the Aleutian campaign where PBYs played a pivotal role, we think a copy of that manual by Ensign Sinkankas was an important part of the margin (narrow) of victory that the United States had in the war in the Aleutians. Actually, if someone does find a copy, maybe it should not go to us but to the Smithsonian. Anyway, it would be well worth studying by English majors as well as geologists. Certainly the latter could generally benefit by learning how to produce the clean, clear, correct, and understandable text that hallmarks all of Captain Sinkankas's writing.

It is hard to believe that books like *Emerald and other beryls* or the three volumes of *Gemstones of North America* will ever be equaled let alone surpassed. To review what other books he has written one would naturally turn to another

Sinkankas book that will surely remain definitive far, far into the future: *Gemology: an annotated bibliography*. There we find a list of twenty-seven (!) significant works by John, not including scores of articles, many of which appeared in the *Journal of the Geo-Literary Society*, of which he was a founding and very loyal member.

Gemology: an annotated bibliography is an enormous, two-volume, large-format work of 1,179 pages in which are described 7,458 books, monographs, and important articles pertaining to gems. In addition to conventional bibliographic details, the contents are described and evaluated. A most useful feature is that a brief biographical sketch of the author(s) is/are given where possible. What better place to obtain an accurate, if spare, biography of this remarkable man.

SINKANKAS, JOHN (1915-), originally Sinkauskas, Jonas

USA naval officer, writer; b Paterson NJ of Lithuanian immigrant parents; BS Paterson State Tchrs Coll 1936; ent US Navy 1936, grad US Naval Air Station, Pensacola, FL, Flight School as Naval Aviator No 5390, 1937; many fleet, shore duties, retired as Captain, US Navy in 1961 (to reside in San Diego, CA). Active mineral collector in Patterson, NJ area from age 7, with encouragement & guidance Dr James Morton, Curator, Paterson Mus, resuming interest in earth sciences with self-instruction in lapidary work ca 1946; first earth science-related article publ R& M, 1948. Briefly edit *Lap J* in 1961, but resigning to devote time to writing and work as Research Mineralogist, Scripps Inst Oceanography, La Jolla, CA. Obtained certified gemologist certificate from Gemological Inst of America and mbr American Gem Society 1952; elected Fellow, Mineralogical Soc Amer 1967; Assoc Editor G & G magazine; PhD (hon) William Paterson Coll, Wayne, NJ 1982. New mineral, sinkankasite, named in his honor (Amer Min, 69, 3/4, 1984, 380). Biogr notes D. Leicht, *Min Rec*, 2, 3, 1971, 103–4, portr; E. Lewis, *Rock* & *Gems*, 3,1, 1973, 10–3, portrs; R W Jones, ibid, 6,1, 1976, 41–7, 80–1, portrs; R S Mitchell, R & M, 61, 1, 1986, 28–31 portr, partial bibliogr. Author of books described below, and over 125 articles.

A very important and useful "book," not always included in his published works, is the collection of 157 Peri Lithon catalogs. A bound set takes up more than 1 1/2 feet of shelf space and each is invaluable for anyone interested in the literature of the earth sciences. As book dealer's catalogs go, they are in a class by themselves. There are a number of the better book dealers around the world who have and do put out visually much more impressive catalogs with lots of "eye candy" reproductions of illustrations, significant and often interesting descriptive text which is usually long on condition, binding, etc., of the book and with much biographical data, extracted from the standard sources, on the author, especially if he or she is famous. All too often the contents, importance, or defects are not dwelled on sufficiently to give the prospective book buyer a good idea about whether the contents will be truly useful.

Peri Lithon catalogs are all "plain vanilla." There are no fancy illustrations nor impressive bindings. They are all, however, done with meticulous detail about all the important aspects of the work, its condition, and what it covers, and whether or not it does it well. John brought an unbelievable depth and breadth of knowledge to this. He was also a polyglot and could and did actually extract the meaning and usefulness, or lack thereof, from seemingly any book in a Western language. Even though a Peri Lithon book catalog obviously was meant to sell books, John had no hesitation in calling a spade a spade. Sometimes his "warts and all descriptions" were very amusing and we treasure several books that we got from Peri Lithon because of John's often humorous pejorative descriptions of their contents. One does not see that very often in most book catalogs. Also the books were, in our experience, never overpriced nor underpriced. In short, a collection of Peri Lithon catalogs will remain valuable sources of information into the foreseeable future and beyond and they are important bibliographic collector's items in their own right.

John and Marjorie's extensive library of books, reprints, pamphlets, and illustrations was acquired in 1988 by the Gemological Institute of America and is now the core of the Richard T. Liddicoat Gemological Library and Information Center. The importance of this library is hard to overstate. John's profound influence on the gem and mineral world through the second half of his long life will continue long into the future, not only because of finely researched published works but also through the availability to scholars of what is generally acknowledged to be the finest gemological library in the world, at the G.I.A.'s Robert Mouawad Campus at Carlsbad, near San Diego. The G.I.A. has gone to great lengths to ensure the proper preservation of this great treasure that took John and Marge half a century to accumulate by dint of much hard work, not inconsiderable expense, and a consummate knowledge of the field, plus an amazing facility with languages. According to G.I.A. president Dona Dirlam, who is senior librarian at the library, the library contains "approximately 14,000 items," which include "virtually all of the major works related to the study of gems and jewelry" (Dirlam, D. et al. 1989, Spring, Gems and Gemology). The fact that the collection has been carefully preserved, kept intact, and made available to the public under conditions that will protect it as well as well as making it accessible is a tremendous monument to this wonderful man, but we are all still going to miss him very much.