



Colorado Scientific Society

*The objective of the Society is to promote
the knowledge and understanding of Earth science,
and its application to human needs*

49th Annual S.F. Emmons Lecture

Crete before the Cretans: Palaeolithic Mariners in the Mediterranean

by

Dr. Thomas F. Strasser

Providence College, Rhode Island



Photo credit: Nicholas Thompson
and Chad DiGregorio



Thursday, January 13, 2011

Colorado School of Mines—Green Center, Metals Hall
924 16th St. (between Illinois and Arapahoe), Golden, CO
Social half-hour—7:30 p.m. Meeting time—8:00 p.m.

2011 Colorado Scientific Society Emmons Lecture

Abstract

Crete before the Cretans: Palaeolithic Mariners in the Mediterranean

by

Dr. Thomas F. Strasser
Associate Professor
Department of Art and Art History
Providence College
Rhode Island

A survey in 2008 and 2009 on the southwestern coast of Crete in the region of Plakias documented 28 preceramic lithic sites. Sites were identified with artifacts of Mesolithic type similar to assemblages from the Greek mainland and islands, and some had evidence of Lower Palaeolithic occupation dated by geological context to at least 130,000 years ago. The long period of separation (more than 5,000,000 years) of Crete from any landmass implies that the early inhabitants of Crete reached the island using seacraft capable of open-sea navigation and multiple journeys—a finding that pushes the history of seafaring in the Mediterranean back by more than 100,000 years and has important implications for the dispersal of early humans. (taken from *Thomas F. Strasser and others, 2010, Stone Age Seafaring in the Mediterranean—Evidence from the Plakias Region for Lower Palaeolithic and Mesolithic Habitation of Crete: Hesperia*, v. 79, p. 145–190.)



President's Message from Lisa R. Fisher



Happy New Year to All!

I am honored, proud, and excited to be your President for 2011. I am looking forward to a year of the hard work that it takes to keep the Society not only on track, but also moving ahead to where our Society needs to go in the future to adjust and adapt to the changing needs of science in our society. My personal goal is to make a significant contribution to our Society and our science.

All the members of our extended Council (Officers, Councilors, Chairs, and active volunteers) deserve great credit and recognition for their dedication and the many, many hours they give. The Society could not run without them, and as always, we need more of you to step up to help. Please consider joining one of the committees in an area of your interest! Or, ask where we need help. I want to sincerely thank several people. Scott Minor, our newest Past President, did a fine job at the helm last year and I thoroughly enjoyed working with him. He had the energy and drive to take care of business, keep everything running smoothly, AND to also move ahead with several new projects for CSS. Don Sweetkind has been doing an outstanding job as Treasurer these past several years, and in my mind is irreplaceable. Libby Prueher is stepping up to take over my old office of Secretary, for which I sincerely thank her. Our councilors, Lee Shropshire, Sue Hirschfeld, Jeremy McCreary, Jim Burnell, and welcoming Liz Pesce last year, kept us on track. Matt Sares joins as our newest Councilor this year. Lisa Rukstales, as always, keeps the newsletter not only on time and on track, but does a great job making it interesting, fun, and complete. Emily Taylor has unraveled our member database problems, not a minor task. Beth Simmons keeps steadfastly working at the tremendous pile of historical materials amassed by the Society over our 129 years. Beth is always there to answer our questions and help with our projects, and we appreciated her efforts on the GSA Topical Session Committee. Cal Ruleman has proved to be a first-class Field Trip Chair! I thank him for staying on another year in that capacity. Christine Turner as Program Chair worked with Scott to bring us several good talks last year, and we will miss her as she takes a break to work on new projects. Sue Hirschfeld keeps busy with our Outreach programs. Chuck Weisenberg represents the CSS at the State Science Fair every year, and Mitch Reese has recently joined us to co-chair with Liz Pesce our Membership-Mentorship Committee. Thom Fisher has stepped

in to help us in several capacities; running our Booth at GSA, representing CSS at the GSA Associated Societies Meeting last November, serving on our website redesign committee, and generally helping me when I need him. Thank you all!!

I also want to welcome our long-time member, Pete Modreski, as our new President-Elect. Pete has been active in CSS for many years, has led field trips, and has certainly helped in our Publicity efforts through his email lists. I have known Pete for more years than I care to admit—as mentor, colleague, and friend, and I look forward to working with him this coming year. Thank you Pete, for volunteering your time and energy for CSS!

In addition, Ben Harrison has agreed to chair our new “Hospitality/Welcoming” committee. We need to better meet and greet both new and existing members, and make them feel welcome and an integral part of our Society. He will also coordinate the rotation of the newly reinstated and much welcomed meeting refreshments (instead of the monthly last-minute, chaotic efforts by “The Lisa’s”!!).

The past year has been a busy one for CSS, and seemed to fly by far too quickly. In addition to our regular talks, meetings, field trips, grant program, student papers, family day, and science fair activities, we have started redesigning our website, and reformed the Membership Committee to address the problem of recruiting new members and providing services, such as Mentoring, to students and young professionals. We joined GSA as an Associated Society, organized a Topical Session and exhibit hall booth at the GSA Annual Meeting, thus becoming more involved in the greater (regional and even international) efforts that are so important to our science. As we get rolling this year, I will report on how these and other new efforts are progressing, and make a more formal call for volunteers.

WESTERN INTERIOR PALEONTOLOGICAL SOCIETY—FOUNDERS SYMPOSIUM

FEBRUARY 12–13, 2011, Colorado School of Mines, Green Center

Pre-registration ends February 5th, so sign up now!

http://www.westernpaleo.org/symposiums/pages_2011/2011.php



Colorado has a rich fossil history. From crinoids that swayed in seas over 200 million years ago to dinosaurs that left footprints on Cretaceous beaches, there’s much to discover in the Centennial State.

For its seventh Founders Symposium, the Western Interior Paleontological Society focuses on paleontology in its own backyard – the state of Colorado. This two-day event is designed for anyone interested in the earth sciences, from professional to avocational, student to teacher. Join us for:

- Lectures by paleontologists and our members
- Poster session and displays of fossils from Colorado and other areas
- Catered evening reception on Saturday featuring art and exhibits
- Show and sale of natural science art



2011 keynote speakers are Vince Matthews, Colorado State Geologist; James Kirkland, Utah State Paleontologist; and Bruce Schumacher, U.S. Forest Service Paleontologist.



2011 Past-President’s Dinner

By popular demand, the Annual Dinner, traditionally held in January before the Emmons talk, has been moved to April this year. Stay tuned for more details!



UPCOMING CSS TALKS

February talks – *to be announced*

March talks – First talk by Dr. Wm. Earl Brooks, USGS, on Thursday March 24. Topic: Ancient Mining in Peru. Second talk *to be announced*.

April talk –Thursday, April 21 *tentatively* Dr. Dimitar Sasselov, Harvard’s Origins of Life Program



Feb. 25–27, Denver Gem and Mineral Guild, Jewelry Gem & Mineral Show
 Jefferson County Fairgrounds, 15200 W. 6th Ave. (Frontage Road), Golden, CO;
 10–6 Fri., 10–6 Sat., 11–5 Sun.; “Free Parking and Free Admission”. For more info.
 see <http://denvergem.org/Shows.html>

Mar. 25–27, Fort Collins Rockhounds Club Gem and Mineral Show at The Ranch
 in the Thomas M. McKee 4–H building, Larimer County Fairgrounds, 5280 Arena Circle, Loveland
 [new location for just this year; normally in downtown Fort Collins]. For more info see:
<http://www.fortcollinsrockhounds.org/gemAndMineralShow.shtml>

CALL FOR PAPERS

JUNE 23–25, 2011

Oil History Symposium and Fieldtrip

The Petroleum History Institute and its co-sponsors are seeking papers, both oral and poster presentations, for the Symposium and Fieldtrip meeting to be held at Marietta, Ohio, June 23–25, 2011. The Symposium will be held on Friday, June 24th and authors can request either the morning or afternoon sessions. Unless otherwise requested, the oral presentations will be limited to 30 minutes, including a short Q & A. Poster presentations will be mounted on Thursday afternoon and will stay available to the participants until Friday afternoon.

We especially welcome papers about the history of the oil and gas industry in the Ohio-West Virginia regions, but also welcome papers on any subject related to the industry. Authors of accepted papers are strongly encouraged to submit their manuscripts for inclusion in the 2011 issue of Oil-Industry History, the only peer-reviewed professional journal devoted exclusively to the history of the international oil and gas industry. For more information, please contact: wbrice@pitt.edu

Please submit abstracts (600 words or fewer) to: W. R. Brice, Editor, Oil-Industry History, 116 Luna Lane, Johnstown, PA 15904; or electronically (MSWord file) to: wbrice@pitt.edu.



DEADLINE FOR ALL ABSTRACTS: MAY 1, 2011.

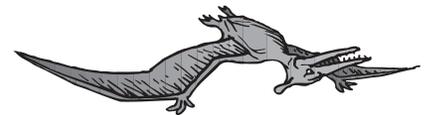


Good Clean Fun

A woman from the deepest, most southern part of Alabama goes into the local newspaper office to see that the obituary for her recently deceased husband is written. The obit editor informs her that the fee for the obituary is 50 cents a word.

She pauses, reflects and then says: “Well, then, let it read, Billy Bob died.” Amused at the woman’s thrift, the editor says, “Sorry ma’am, but there is a 7 word minimum for all obituaries.”

Only a little flustered, she thinks things over and in a few seconds says: “In that case, let it read, Billy Bob died - 1983 Pickup for sale.”



A woman walked into the kitchen to find her husband stalking around with a fly swatter.

“What are you doing?” she asked.
 “Hunting flies,” he responded.
 “Oh. Killing any?” she asked.
 “Yep, 3 males, 2 females,” he replied.
 Intrigued, she asked. “How can you tell?”

He responded, “3 were on a beer can, 2 were on the phone.”

All you really need to know about Government and Bureaucracy:
 Pythagorean Theorem:24 words.
 Lord’s Prayer:66 words.
 Archimedes’ Principle:67 words.
 10 Commandments:179 words.
 Gettysburg address:286 words.
 Declaration of Independence:1,300 words.
 U.S. Govt. regulations on the sale of cabbage:26,911 words.

A few pictures from the December 2010 meeting...



Scott Minor giddily hands over the reins and silver gavel to Lisa Fisher, the new CSS Prez!



Mitch Reese dreaming of the day when he can be president of the CSS!



Liz Pesce and Lisa Fisher



Run away! It's waaaay past our bedtimes!



Blondies unite! Chriissy and Karl pose.

2011 President-elect Pete Modreski helps with snack duty.



Scott Minor and Mark Hudson laugh as they consider writing a book called, "365 Days: How I Survived the CSS Presidency!"



Star Crossings and Stone Monuments—Field Astronomy by the Wheeler Survey in 1870s Colorado is a newly published USGS Circular (1362). The author, William E. Wilson, is a former USGS hydrogeologist who retired in 1993, and is an active member of Historic Georgetown, Inc. The circular describes the history and present state of three still-existing stone monuments, one in Georgetown, that were erected to mark the sites of astronomic observation stations established by the “United States Geographical Surveys West of the One Hundredth Meridian” led by Lt. George M. Wheeler in the 1870s.

Bill’s research into the history of these monuments makes for a fascinating report. He first learned of their existence by being curious about the notation “Astronomic Monument” shown on former and present topographic quadrangle maps of Georgetown. He visited the site of the Georgetown monument, which is on private land at the east edge of the town, and was able to locate the remains of two other monuments, at Julesburg and Trinidad. Three others once existed in Colorado Springs, “Hughes” (now Brighton), and “Labran” (now Florence), plus one made of brick in South Pueblo (now a part of Pueblo), but no trace of them has been found. His work culminated in the raising of funds for the erection of a steel shelter to help protect the Georgetown monument from further weathering, as well as a new monumented plaque describing the site. The circular includes the story of Dr. F. Kampf, “Wheeler’s Astronomer in Colorado,” and about the controversy as to why the monuments, supposedly authorized to be made of “Maine Granite,” were instead made of sandstone from Colorado, which did not fare well in its exposure to weathering over the past 130-plus years.

Circular 1362, 38 pages and containing a number of B&W and color illustrations, can be viewed online and downloaded as a PDF at <http://pubs.usgs.gov/circ/1362/> or can be ordered from USGS Map Sales or obtained over-the-counter from the Map Store in Building 810 on the Denver Federal Center. There is no charge for the circular, but a \$5 charge applies to mail orders.

—*Review by Pete Modreski*



Bill Wilson at Georgetown Monument, Oct. 2003.
Photograph by Pete Modreski.



Time to Pay Dues for 2011...

....if you don’t pay, we’ll hide the cookies and hot cider from you!

You can find a dues payment form on the CSS website:

www.coloscisoc.org/membership/dues.html

Dues payments are \$20 for regular members; \$10 for corresponding members (outside the Colorado Front Range area), and \$5 for students. You may pay your dues by mailing a check to the CSS, or pay with a credit card using PayPal on the CSS website. If you are uncertain if you owe dues or of your member status, contact CSS Treasurer Don Sweetkind by phone at 303–236–1828 or by e-mail at dsweetkind@usgs.gov.

As you pay your dues, please consider making an additional contribution to one of our Memorial Funds, which support our student research grants program, or the Endowment Fund, which we use to defray operating costs. Any contributions made in calendar year 2011 (checks dated before 1 January 2012), will be credited toward the 2011 tax year.

Please remember that your entire contribution goes towards generating interest for the grants and that your contribution is 100% tax deductible because the Society is a non-profit Section 501 (c)(3) organization. A big THANK YOU to everyone who has donated.



Earth Science Meetings and Talks

Newsletter items must be received by the 25th of each month.



Colorado Scientific Society's regular meetings are held the 3rd Thursday of the month at the Colorado School of Mines in Golden (unless otherwise advertised). Social time begins at 6:30 p.m. and talks start at 7:00 p.m.
For more information, contact Lisa Fisher, at 303-215-0480, lisa.fisher@escalantemines.com

Café Scientifique 2 Thurs., Jan. 27, *Martin Lockley, Univ. of Denver*, “The evolution of consciousness: from invertebrates to dinosaurs and humankind.” Meets at Brooklyn’s near LoDo, evening science talks at 6:30. Free, except for beer. <http://www.cafescolorado.org>

CO-AIPG Jan. 18 *Jon P. Thorson, Consulting Geologist, Parker, Colo.*, “Paradox Basin Brines and Lisbon Valley Sandstone-hosted Copper Deposits.” 11:30 AM social gathering; Noon lunch & subsequent talk. Meetings at the Petroleum Club (3rd Floor in the Denver Athletic Club building), 1325 Glenarm Street, Denver. Make an advance reservation so that seating and food prep. are adequate to cover attendance. Cost is \$25 with advance reservation and \$30 at the door. Paid parking is available along the street (metered) or in the adjacent parking lots and parking structure. Contact Jim Russell by Noon on January 14 for reservations at 303-278-4456 (home), 303-815-3901 (cell), or via e-mail at summitdatasvcs@msn.com.

Colorado State University, Dept of Geosciences, Rm 320 Warner College of Natural Resources Bldg., Mondays, 4:00 pm. 970-491-5661. **Jan. 24,** *Dr. Paul Sava, CSM*, “Wavefield seismic imaging in a nutshell”; **Jan. 31,** *Dr. Kirk Johnson, DMNS*, TBA; **Feb. 7,** *Dr. Craig Jones, CU Boulder*, TBA. <http://warnercnr.colostate.edu/geo-training/>

DIPS (Denver Intl. Petroleum Society) Friday, Jan. 14 *John B. Gustavson*, “Geology and Valuation of Prospects in Tajikistan.” Wynkoop Brewing Company, 1634 18th Street, Denver. Gather at 11:30 am; Lunch served at Noon; Lunch price: \$15.00 for members and \$18 for non-members. Please e-mail Bob Zilinski, at rezilin@aol.com or call him at 303-885-0615 to make reservations before Wednesday, Noon, Jan. 12.

Denver Mining Club Jan. 10 *Guy Johnson, Technology Applications & Marketing*, “Energy Access for All.” (Video Presentation from Peabody Coal). **Jan. 24** *Jane Haynie, Sensear, Inc.*, “Hear Speech, Stay Protected: A Total High Noise Solution.” The DMC meets every Monday at the Littleton Country Buffet near Bowles and Wadsworth (8100 W. Crestline Ave., in the shopping center) 11:30–1:00. Purchase of lunch required. <http://www.denverminingclub.org>

Friends of Dinosaur Ridge Fireside Chat Jan. 25, 7:00 p.m., *Dr. Whitey Hagadorn, Denver Museum of Nature & Science*, “Death of a Megapredator—Debunking, downsizing, and constraining the record of predation in the Paleozoic, with emphasis on showing that the famous predator *Anomalocaris* of Burgess Shale fame was not a ferocious trilobite-eater.” Held at the Lutheran Church of the Master, northeast corner of Bear Creek Parkway, West Jewell Ave and Alameda Parkway, Lakewood, CO. Contact Beth Simmons at cloverknoll@comcast.net for info. <http://www.dinoridge.org>.

Rocky Mountain Association of Geologists (RMAG) Jan. 14 *Toni Simo, AAPG Distinguished Lecture*, “Isolated carbonate platforms and mounds (ICPM): Initiation, growth and demise.” Special Early Evening Event at 5 P.M. Reservations by recording at 303-623-5396 until 10:30 a.m., prior Wed. Luncheon \$30. Talk only (no res.)—\$5. Location: Denver Marriott City Ctr., 17th & California. **Upcoming:** 2010 RMAG Short Course by Ron Blakey, Jan. 28, 2010, 8:00 a.m., “Paleographic and Paleotectonic Maps—Use, Construction, Interpretation and Example.” <http://www.rmag.org/events>.

Rocky Mountain SEPM Jan. 25 *Donna S. Anderson, EOG Resources, Inc. & Colorado School of Mines*, “Stratigraphy and Depositional Controls on the Juana Lopez of the SE Uinta basin.” Reception at 11:30 p.m., lunch at 11:45 p.m., speaker at 12:15 p.m. Reservations: luncheons@rmssepm.org, before noon of preceding Friday. \$20.00 lunch, \$5 talk only. Wynkoop Brewing Company, 1634 18th St., Denver. <http://www.rmssepm.org/luncheons.shtml>

U.S. Bureau of Mines Rocky Mountain Region Annual Reunion. Fri. Jan. 7, 2011. 11 a.m. Meet with friends and former employees at the Country Buffet, 8100 West Crestline Ave., SE corner at Wadsworth, Littleton. No RSVPs needed; just show up and pay your own way.

USGS Rocky Mountain Area Seminar Series Jan. 11 *Henry Fricke, Colorado College*, “New ways of studying old dinosaurs—what geochemistry can tell us about their ecology and migratory behavior.” **Jan. 25** *Jim Faulds, Univ. of Nevada, Bureau of Mines and Geology*, “Spatial and Temporal Evolution of the Walker Lane-Eastern California Shear Zone: An Incipient Transform Fault along the Pacific-North American Plate Boundary.” Tuesdays at 10:30 a.m., Building 25 Lecture Hall, Denver Federal Center (Kipling St. & 6th Ave., Lakewood, CO; use the lg. parking lot east of Bldg. 25, and enter via main entrance on east side near center of building). Contact: Peter J. Modreski, USGS, 303-202-4766, pmodreski@usgs.gov

Colorado Scientific Society
P.O. Box 150495
Lakewood, CO 80215-0495

<http://www.coloscisoc.org>



WANTED:
New CSS
Members

OFFICERS

President:	Lisa Fisher, CSM, 303-478-9427 (c), lisa.fisher@escalantemines.com	2008–2011: Lee Shropshire, UNC, 970–352–8778, leeshrop@comcast.net
President-Elect:	Pete Modreski, USGS, 303-202-4766, pmodresk@usgs.gov	2008–2011: Sue Ellen Hirschfeld, eqdoc@ix.netcom.com
Treasurer:	Don Sweetkind, USGS, 303-236-1828, dsweetkind@usgs.gov	2009–2012: Jim Burnell, CGS, 303–866–2611, jim.burnell@state.co.us
Secretary:	Libby Prueher, 720-260-0350, lprueher@umich.edu	2010–2013: Liz Pesce, epesce@mines.edu
Past President:	Scott Minor, USGS, 303-236-0303, sminor@usgs.gov	2011–2013: Matt Sares, CGS, 303–866–2611, matt.sares@state.co.us 2011–2013: Jeremy McCreary 303–744–0907 jeremy@cliffshade.com

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Program:	VOLUNTEERS NEEDED! CONTACT LISA FISHER FOR MORE INFO.!
Publicity:	
Science Fair:	Chuck Weisenberg, 303–238–8806, cweisnbrg@msn.com
Webmaster:	Table Mountain Web Design, 303-278-2701, bwarden@tablemntn.com



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