



Mineralogy FAQs

Who was James Dwight Dana?

To many of his contemporaries, James Dwight Dana (1813-1895) was the foremost American geologist of the nineteenth century. His *Manual of Geology*, in its fourth edition when he died in 1895, was on the shelf of almost every American geologist, and he used it to teach two generations of students while a professor in the Sheffield Scientific School at Yale. Dana was celebrated for his *System of Mineralogy* (1837), for his report on the geology of the U.S. Exploring Expedition (1849), for monographs on crustaceans and corals, and for a seminal text on volcanology he wrote in his 70s.

Dana came from a religious family. His father owned a hardware store in Utica, New York, and Dana, the eldest of four children, became adept with tools. He was musical—piano and guitar—and artistic. His mother ran the household, and her emphasis on religiosity had a lifelong influence on Dana. He liked to “tramp” and began collecting rocks, plants, and insects at an early age. He entered the sciences when opportunities for both travel and communication grew in response to the industrial revolution, and in his case, with the size, wealth, and influence of his own nation.

Dana trained in several disciplines at Yale under his future father-in-law, Benjamin Silliman, founder and editor of the *American Journal of Science*. After Yale, Dana served as an instructor on a U.S. Navy vessel that sailed to the Mediterranean, where he saw Vesuvius in eruption and pursued entomological studies. His account of the eruption in a letter, published by Silliman in the *Journal*, was Dana's first scientific paper. In 1834, Dana returned to Yale, where he developed a new mineral classification based on chemistry and crystallography and using Silliman's cabinet of minerals and his own childhood collection. The resulting *System of Mineralogy*, published when Dana was just 24, ran to four editions in his lifetime.

Dana took up geology mainly when he became geologist and mineralogist of the U.S. Exploring Expedition (1838-1842). This expedition was charged with charting islands in the Pacific—potential way stations for American clipper ships and whalers—and venturing to Antarctica. Besides Dana, the civilian “scientifics” included specialists in botany, vertebrate zoology, conchology, and philology, plus two artists. Dana, however, felt deficient in geology and looked on the expedition as an opportunity to learn it and other branches of natural history. The expedition took Dana to the Andes, to the atolls and reefed volcanic islands of the Pacific, and to the active volcano of Kilauea in Hawaii.

Dana was only 25 when the expedition sailed in August 1838, under Acting Captain Charles Wilkes. For American science, the expedition was without precedent—the first blue-water oceanographic expedition funded by the U.S. Navy. With six ships, it was far larger than earlier European ventures to the Pacific. It was also the first American exploration on land or sea to make systematic geological observations. Only Darwin, whose career Dana's paralleled in many ways, had done geological work on volcanic islands and reefs (on the *Beagle* a few years earlier). On sailing, Dana had Darwin's *Journal of Researches*, now usually called *Voyage of the Beagle*, but it provided only glimpses of geology in South America. The Pacific was still virtually terra incognita and a magnificent opportunity for a young scientist.

The trip was not always convivial. In one letter, Dana described it as “Naval servitude,” and the imperious Wilkes eventually sent one scientist home after a disagreement and ordered Dana to assume his responsibilities. The expedition was also hazardous. Dana's ship was nearly lost in a storm in the Straits of Magellan. Unfriendly natives daunted the work in Fiji. Later, another vessel had to be abandoned, along with many of Dana's samples, after running aground at the mouth of the Columbia River. On Dana's return, his adventurous tales charmed the 19-year-old Henrietta Silliman, and within a month they were engaged.

Dana's Pacific synthesis is presented in several chapters of his expedition report on geology, which Dana drew on for the rest of his career. The expedition's scale prompted him to think globally. Each facet of Pacific geology—atolls, the radially dissected volcano of Tahiti, the islands of Samoa that are studded with small volcanic cones, the grand natural theater of the cauldron at Kilauea—is given a chapter, and the whole

is concluded almost from the perspective of one looking at a globe in a study. The islands occur in concentric chains, each active only at one end. Toward the other end, the deeply eroded volcanoes eventually disappear beneath the waves. Only tiny coral resists, and sustains a reef, first at the shore of the volcano, then farther away, and finally bounding only the waters of an atoll lagoon. Darwin, of course, said this first, as Dana always acknowledged, but Dana actually had the idea independently, and in Sydney, Australia, he was nonplussed to read an account of Darwin's first publication on the evolution of reefs.

Dana, however, added key facts, establishing that embayments of the volcanic stumps within the lagoons are drowned, deeply subsided remnants of river valleys that could not have been carved by waves. Also, the corals finally die, and the atolls slip beneath the waves. Later, in his volume on corals, Dana predicted the existence of deeply submerged, drowned atolls, today's guyots, in the far western Pacific. In 1849, Dana also contrasted the linear chains with the arcuate ones bounding the Pacific basin, which generally occur in regions of uplift, and are active all along their lengths.

Dana was adept at grand geological synthesis. His four most important concepts were: (1) understanding the patterns of age progression and subsidence of linear volcanic chains in the Pacific based on extents of erosion and relationship to offshore reefs; (2) the geological distinction between continents and ocean basins, and the doctrine that both are permanent features of the globe; (3) the place of geosynclines (a term he coined) in orogeny; and (4) the concentric accretion of mountain belts about the ancient interior of the North American continent. All of these are foreshadowed in his report *Geology*.

To Dana, the principal physiographic features of the Pacific basin are geologically young, although they rest on ancient rock, and there are two dynamic domains. One is in the middle of the basin—the linear, volcanically active ridges; the other is at the edges of the continents—the arc volcanoes and active mountain belts. The arcs bound much older, inactive interiors. The arrangement results from contraction of a cooling globe. The Pacific basin is that portion of the globe where hot volcanic material has long vented to the surface and is resisting contraction; the continents are cold and disrupted at their margins, where the surface of Earth is currently taking up the shrinkage. Continental interiors carry the ancient history of this process and gradually increased in area as Earth shrank throughout geological time. The ocean basins and continents are thus separate, permanent, and very different geologically. Dana doubted the existence of submerged continents beneath the great oceans, believing them to grow outward at their edges toward the ocean basins, which are mainly basaltic constructs. This was decidedly at odds with contemporary thinking, and even with much later tectonic theory, especially that of the eminent Austrian tectonicist, Eduard Suess.

With the decade-long writing of the expedition reports, Dana established the program for his life's work. Still to come were the documentation of accretion of continental crust, formation of geosynclines at the disrupted continental margins, and a role in the complicated Taconic controversy. He wrote thousands of pages, preparing many of the illustrations himself. He suffered vicissitudes of health, including a physical breakdown in his late 40s. Nevertheless, he recovered and actively pursued his science, returning (in more comfort) to Hawaii in his 70s to prepare for his volume on volcanoes, revising his texts, answering a huge correspondence, and writing papers until a few days before he died.

Even with the hindsight of plate tectonics, Dana's concepts are surprisingly modern. He contributed the core observations that form the basis of the Wilson-Morgan hypothesis of the passage of plates over hot spots, producing linear island chains in their wake. Only after his death did geophysics firmly dispose of the idea of contracting Earth. After that, no other tectonic hypothesis held as much sway until the advent of plate tectonics. Plate tectonics confirmed the contrast in age and structure between continents and ocean basins, and their permanent, albeit shifting, configuration. It finally involved the distinctive character of the ocean basins in a truly global synthesis.

Dana held no strictly uniformitarian view of Earth history. A devout Christian, Dana had a New Englander's properly Protestant view of the direction of Earth history. At one scale, he saw this in the progressive volcanism, erosion, and subsidence of linear volcanic chains. At another, the continents themselves have grown, and life itself has changed form in many ways; always, in Dana's view, becoming more complex, accordingly as the area of land increased and global climate became more rigorous. This was plan, not chance. The paleontologist in Dana saw this, from a very nineteenth century phrenological perspective, in the growth and shape of the skulls of vertebrates. Thus a benevolent creator, whom Dana termed the "Power Above Nature," prepared Earth for the benefit of His children, who are at the present end point of history. Such sentiments pervade Dana's writing, as one might expect from a man who led Bible studies, played the piano for his church choir, and prayed with his family over meals.

One's system of beliefs often contributes to scientific hypothesis. Dana had outlooks that are difficult to reconstruct and experiences that are impossible to re-create. Dana's work is remarkable because he was able to make so much out of what we today would consider so little. His mind arched broadly and with great discipline over many topics. Within his final, chosen field of geology, his influence was pervasive and extends even to us today.

By James H. Natland, published in Geological Society of America's GSA Today. Used by Permission.

Reports

REPORT OF NATIONAL FRIENDS OF MINERALOGY ANNUAL MEETING – FEB. 15TH, 2003

Pres. Susan Eriksson called the meeting to order. Attendees introduced themselves. Newly elected or re-elected directors for 2003-06 are Susan Eriksson, Jim Hurlbut, Art Soregaroli, Tony Nikischer, Carol Smith and Walt Lombardo. Officers from the year 2002 were re-elected for 2003 by the Board at its Feb. 11 meeting: Pres. – Susan Eriksson; V-P – Bill Dameron; Treas. – Jim Hurlbut; Sec. – Virgil Lueth.

Treasurer's Report: Presented by Jim Hurlbut. FM began the year with \$21,073, total expenses for the year were about \$3,500, and outlays were again more than income by a little more than \$1,000. Membership is declining. A FM Board group will be looking at the dues structure, which hasn't been changed in years. Next year's preliminary budget, not much different than last year, was also outlined. At its Feb. 11 meeting, the Board approved a \$3,000 contribution to *Mineralogical Record* to support a special supplemental issue on petrographic microscopes, following a request to do so last year. The Board also agreed to donate \$200 and thus become a sponsor/patron of a book by Bob Jones on the 50-year history of the Tucson Gem and Mineral Show. Book will be available next year at the 50th anniversary of the show.

Chapter Reports: Chapter reports were given by the Pacific Northwest, Midwest, Southeast, Pennsylvania and Colorado Chapters.

Committee Reports: Committee Reports from the February 11th Board meeting were summarized.

Awards: Bill Dameron announced winners of FM awards, noting that at the TGMS banquet later that evening certificates presented. Best Article '02 – *Rocks & Minerals*: Dan Kile; – *Mineralogical Record*: Jesse Fisher; Best Educational Case, TGMS, '03 – Individual: Georg Gebhard; – Institutional: Virginia Tech; Werner Lieber Photo Contest – Professional, Saul Krotki; – Amateur, Gene Reynolds.

Website: Chapters were asked to contribute information to keep the FM website up-to-date.

Affiliations (formerly AGI Affiliation): Susan Eriksson attended 2 geoscience education forums. Nelson Shaffer mentioned a booklet for teachers for Earth Science Week and asked that members let him know about other outreach programs. Board reformed committee to include all affiliations (see New Biz).

Locality Indexes: It was announced that Pete Modreski would undertake a survey of what has been done, notably the state indexes in *Rocks and Minerals*, those partially completed, and what our next priorities should be. There was some discussion about centralizing what has been and will be done, hosted perhaps by AGI, and the possibility of common formats.

FM Page in *The Mineralogical Record*: It was noted that Tom Wilson will be updating our page more frequently and changing some of the contents from time to time. Input from Chapters is needed.

FM Case: Bill Dameron described the new FM case at the TGMS show and the need for help in putting it together and storing risers and liners. Information Booth at the TGMS Show: FM's new presence in the Convention Center entryway with The Mineralogical Society of America and the Mineralogical Association of Canada was enthusiastically supported. The need for volunteers to man the booth was noted.

Old Business: The contribution to *The Mineralogical Record* has already been noted.

New Business (and Newsletter): FM is formalizing our long-standing cooperation with *Rocks and Minerals* magazine through affiliation. This involves no practical changes. Affiliation with other groups has been discussed at the Board meeting and was again noted at the General Meeting. FM's Board will actively seek to increase our membership. One of many ways to do this is by affiliation with other groups and clubs, perhaps for a very small fee. For instance, the Northeast, home of several active mineral clubs is one area for expansion. This would be connected also with the need to reexamine FM's dues structure, as noted under the Treasurer's Report. Bill Cook described the fundraising effort headed by the Maine Geological Survey to purchase the famous Newry mines for a permanent park for recreational collecting. It was suggested FM might consider involvement, something the Board agreed to consider. There was some discussion also of the Board's consideration of sending the Newsletter both by electronic mail, when possible/requested, and by regular mail. There was even more sparse attendance at this annual general meeting than usual. The Board noted they will try to find ways to attract more attendees next year. The meeting needs much more publicity, in advance in the newsletter; perhaps a raffle for dealer gift certificates; and or snacks/drinks (although the TGMS banquet follows shortly afterward). Thanks were in given to member Ann Cook, who helped to take notes of the meeting. Bill Dameron also noted an FM Committee will finalize and propose some bylaw changes to modernize FM's business practices and make it easier to get things done in the electronic age.

Submitted by Bill Dameron, Vice-President

Reports

REPORT OF NATIONAL FM BOARD OF DIRECTORS ANNUAL MEETING – FEB. 11TH, 2003

Call to Order: President Susan Eriksson called meeting to order at 6:40 p.m.

Members Present (at Club 21 Tucson, AZ): Susan Eriksson (Pres.), Bill Dameron (V-P), Jim Hurlbut (Treas.), Virgil Lueth (Sec.), Regina Aumente, Marie Huizing (*ex-officio*), Jim Etzwiler, Bob Reynolds, Marty Sherwood, Ray Grant, Skip Simmons, Tony Nikischer, Wendell Wilson (*ex-officio*), Art Soregaroli, Tom Wilson, Julian C. Gray, Andrew Sicree.

Report of the Nominating Committee: Bill Dameron presented the report in the absence of the committee chair, Sharleen Harvey. Roll call of the nominees consisted of: Tony Nikischer, Walt Lombardo, Art Soregaroli, Carol Smith, Susan Eriksson, and Jim Hurlbut. New board members were introduced. Virgil Lueth reported all nominees were elected.

Introductions: All members of the board introduced themselves and their affiliations.

Nomination of Officers: The nomination committee recommended that the current board officers be retained for the next 1-year term. Motion by Skip Simmons, seconded by Tony Nikischer, to retain the current officers was approved. Resolution to thank the retiring board members, Mike Howard, Jack Neiberger and Karen Wenrich, for their years of service was made by Bob Reynolds and seconded by Jim Etzwiler. Resolution passed. Pres. Eriksson will draft a letter containing the resolution and send it to the retiring directors. A special resolution, acknowledging and thanking Karen Wenrich for initiating and maintaining the Werner Lieber contest, was included.

Call for Additions to the Agenda: Call for new items for the agenda made and none were forwarded.

Acceptance of the Minutes of the Last Meeting: Secretary Lueth called for approval of the minutes as presented in the last FM Newsletter. J. Hurlbut so moved and Skip Simmons seconded. The motion passed.

President's Report: We need more executive committee meetings to coordinate activities, and monthly email meetings. Concerned about lack of communication with chapters, and drop in membership (there has been an actual decrease in addition to communication/dues problems). Suggests a Tucson booth and member drive and distribution of membership flyers and shows nationwide.

Vice President's Report: Bill noted FM presents six awards. Submissions to the Werner Lieber photo contest this year remained to be voted on. Directors will vote on the photographs during the course of the meeting. Awards for best articles were highly appreciated by recipients and brought FM good publicity. Winners for 2002 were: *Rocks & Minerals*, Dan Kile; *Mineralogical Record*, Jesse Fisher. Framed certificates would be presented at the Sat. night banquet and \$200 checks would be presented from FM to each magazine. Best Educational Case awards (Institutional and Individual) originally sponsored by Kay Robertson would get more publicity with handsome plaques listing past winners in the new FM case at TGMS. Wendell asked that information on current and past award winners be provided to Bob Jones for his upcoming book on the 50th anniversary of TGMS. Bill indicated this had been done.

FM Case: Bill noted there would be a new FM case at TGMS with the plaques mentioned above, information on FM and a few very good specimens conforming to the TGMS theme.

Bylaws: Bill noted also need for bylaw changes to bring FM up-to-date. Discussed under new business.

Secretary's Report: Virgil Lueth had nothing to report.

Treasurer's Report: Jim Hurlbut took over the treasurer position at the last meeting. Jim noted problems with the compatibility of California and Colorado banking laws. Accordingly, Jim established an operating account in Colorado using funds from the previous account in California. A written report was submitted to the board. FM retains a significant balance in its accounts. A 20% reduction in dues receipts was noted although total income rose due to some members, especially those in the NW chapter, paying for multiple years of membership. Since the group's books are kept on a cash and annual basis, this will mean we will have a loss next year. Dues for the SE chapter were not included and some problems remain in communication. The board stated they trusted the Treasurer to maintain adequate records of accounting despite the use of duplicate accounts. The preliminary budget for next year was also presented. An additional \$150 for web page maintenance was added. A motion to adopt the budget for next year was tabled until the end of the meeting. A question concerning how chapters are formed or the possibility of affiliations for existing clubs was discussed. A task force to develop answers to these questions will be appointed. A final note that FM is in its second year of deficits was noted and a review of dues structure

may be required. A suggestion to email the business of the group to the membership may allow for a cost reduction. The task force will also address this issue.

Committee Reports: *Website* – the need to modify local web sites to reflect changes in the national site was stressed. Site needs for timely updates from the regional chapters and national directors. New links need to be established within local groups. Current webmaster, Darcy Howard, will be retained.

Werner Lieber Photos – the distribution of the photos has been problematic. The desire to circulate the photos has proven difficult due to the inability to effectively transport the photos. Skip Simmons produced a CD of the photos for distribution to the membership. A computer was available to review the photos and they can be printed off from inkjet printers. Concern over copyright issues about posting photographs on the web was discussed. A statement indicating the photographer gives free use to FM by submitting the photos will be added to the submission form.

Symposium – this year's symposium is scheduled for 10 to 3 p.m. Sat., Feb. 17. Bob Cook is chairing the symposium on Andean Minerals. He has also agreed to chair next year's symposium. Reprints will be available at the meeting. W. Wilson inquired as to how many copies of abstracts should be printed for the meeting. It was decided that 250 of each would be sufficient. Abstracts will also be posted on the website.

Affiliations (AGI) – Susan Eriksson attended 2 geoscience education forums and reported on the results. More earth science week participation by affiliated societies needs to be increased. Many states have removed earth science education requirements so a stronger focus on education is required. An average of only 8% of teachers of earth science is certified in the subject nationwide. The Sterling Hill museum was cited as a fine example of a proactive program of education.

Club Affiliations – Tony Nikischer inquired if FM wants to pursue affiliations with clubs in the northeast, if not forming a chapter in the area. The value of club affiliations, perhaps for a small fee, was discussed.

Mineralogical Record Page – T. Wilson called for current update of membership, list of directors. Tom will initiate contacts with the executive committee to keep the page up to date. The board also discussed changing the contents of the page on a regular basis, beyond the listing of goals, chapters, and officers.

TGMS Display Case – Bill and Diana Dameron put together an FM case for the show with nice plaques for the winners of the Best Educational Cases, information on FM and some good minerals. Four to six high quality pieces fitting the theme of the show are also included in the display. We need someone to take over the case on a regular basis and take responsibility for liners and risers; Bill will continue to handle the engraving of the plaques.

Information Booth – For the first time ever, FM has an information booth at the entrance to the TGMS show. The purchase of a permanent information kiosk was postponed in lieu of less expensive materials for presenting computer-generated FM posters. An information pamphlet was produced and available for distribution. A call for volunteers to man the booth and schedule was passed among the board members.

Locality Index – a short history of the state mineral index project was presented. The need for a list of completed states was discussed. Susan announced that FM member Pete Modreski, who has worked on the locality issues in the past, has offered to put together a complete list of what has been done so far, partially completed projects and priorities. All agreed this was one of FM's best-known projects, and we need to do more as members/directors.

FM Social – Regina Aumente was commended for the organization of this year's event.

Committee Assignments: *Nominating* – Sharleen Harvey was absent from the meeting but has agreed to continue on this committee. Outgoing board members are ineligible.

Website – Darcy Howard agrees to continue as web master under the current agreement.

Werner Lieber – The departure of Karen Wenrich from this committee will require chairman.

TGMS Display Case – Bill Dameron agreed to continue updating the plaques for the Best Education Cases, making labels for magazine award winners and the FM information sheet. Subsequent to the meeting Director Carol Smith agreed to help with finding quality specimens for the case and a person in Arizona was found to keep the risers and liners.

Information Booth – Susan Eriksson agreed to handle the TGMS booth for next year.

Locality Index – As noted above, Pete Modreski will compile a catalogue of what has been done and needs to be done. Bill Dameron will follow up.

Newsletter – Andrew Sicree will continue as newsletter editor for another year and asked for input, criticism, and articles.

Social – Regina Aumente agreed to keep helping with our social events.

Bylaws – As would be discussed under new business, Bill Dameron had circulated proposed changes to the bylaws, designed primarily to make FM's structure and procedures more compatible with other

organizations and today's communications possibilities. Bill Dameron, Virgil Lueth and Julian Gray will follow up. The board agreed to the need for a permanent committee on bylaws/operating regulations.

Chapter Reports: Chapter reports were given by the following chapters: Colorado, Southeast, Midwest, Pacific Northwest, Pennsylvania, and California.

Old Business: *Mineralogical Record Special Issue* – Following up on the request at last year's Board Meeting by *Mineralogical Record* for \$3,000 to support a special MR publication on petrographic microscopes, it was confirmed that the Colorado chapter had donated money and that over \$15,000 had been raised. It was stated that FM's support would make the project a "go." Wendell Wilson presented a mockup. J. Etzwiler moved to approve the funds, A. Sicree seconded, motion passed.

New Business: *Affiliation with Rocks & Minerals Magazine* – Susan Eriksson suggested that FM should be affiliated with *Rocks & Minerals Magazine* similar to the relationship that it has with the *Mineralogical Record*. A motion proposing affiliation was made by A. Sicree and seconded by J. Etzwiler. The motion was passed. Marie Huizing said she would write a letter to the director of Heldref Publications proposing a formal affiliation.

Bylaws Changes – Bill Dameron had circulated in advance suggestions to change the bylaws by: (a) electing officers for two years instead of one, so they can at least learn their jobs; (b) streamlining the Board from 28 total to 22 by reducing the members elected at large from 18 to 16; (c) allowing FM business to be conducted by mail (and, when individual members agree, by e-mail). A Bylaws Committee was approved to review all the current bylaws and propose changes to facilitate FM's ability to conduct business. W. Dameron, V. Lueth, and J. Gray agreed to serve on the committee.

Additional Board Meeting – A proposal to have another board meeting to be held at Denver was discussed. Monthly email meeting of the executive committee was also proposed.

Goals for 2003: *Financial* – review dues structure and improve member services. Although FM continues to retain significant amounts of money in its accounts, expenses have exceeded income over the last couple of years and the current dues structure has not changed in recent memory.

Locality Index – better plan and monitor progress.

Communication – better inform the members of activities.

Newsletter Issues: *Membership Directory* – responsibility assigned to the Treasurer. *Communication with the Editor* – make messages clear in early portions of email. Deadlines will be communicated by the editor to the board and a master calendar for publications developed. *Mailing procedures* – First Class mailing costs 23-25 cents per newsletter that can be reduced to 17 cents by "piggybacking" on other organizations mailings. Board instructed the editor to proceed with the best value for the organization. *List of Directors* – needed for newsletter. *Emailing of Newsletters* – to reduce mailing costs, the feasibility of electronic mailing of newsletters was discussed. Other societies have significantly reduced mailing costs by converting to an electronic format. It was noted that the number of members with access to the internet could be a problem.

TGMS 50th Anniversary Issue: Wendell presented to the Board a letter from Bob Jones seeking assistance for a special book on the 50th anniversary of the Tucson show, which will review the history of the show. A gift of \$200 entitles organizations and individuals to be listed as sponsors of the project. The Board approved \$200 to help sponsor the history.

Web site Awards: A recommendation that the FM present awards for mineral education web sites was discussed.

Budget: Jim Hurlbut seconded Skip Simmons presented a motion to approve an amended budget. The following changes were proposed: \$3000 to *Mineralogical Record* for the petrographic microscope issue; \$200 for the publication of the special book on the TGMS 50th Anniversary; \$150 for web site maintenance, retaining Darcy Howard as webmaster. The motion passed.

The meeting adjourned at 9:10 p.m.

Submitted by Virgil Lueth, Secretary

Dues Notice

According to the By-Laws dues are due by April 1. Your mailing label has the date for which year your dues are paid. For anyone who has not paid their dues for 2003 may cause your name to be dropped from the National FM Roster which is scheduled to be issued in July.

James F. Hurlbut, Treasurer.

Reports

SOUTHERN CALIFORNIA FM CHAPTER REPORT

The SCFM March 18 Mineral Symposium was very successful, with the theme "Minerals from Nevada." Presentations included "Arsenate minerals from the Great Basin" (Sugar White), "The inventory of meteorites from Southern Nevada" (Bob Varish), "New minerals from the Meikel mine, Elko County, Nevada" (Jane and Casey Jones), and "Mining and minerals from the Goodsprings District" (Walt Lombardo). Walt also led a field trip to the Goodsprings District on Sunday. The SCFM Mineral Locality Symposium for October 18 will be held at the Riverside Municipal Museum with a theme "Minerals from Eastern Riverside County." Portions of the SCFM traveling photo exhibit, "Minerals of Southwestern States," were on display at the Desert Discovery Center of the Mojave River Valley Museum in Barstow, California. The Jurupa Mountains Cultural Center in Riverside also plans to display portions of the collection. Members of SCFM continue to inventory mineral suites at localities in the Mojave Desert slated to become wilderness, when access will be limited and collecting prohibited.

Submitted by Bob Reynolds, President Southern California FM Chapter.

SOUTHEAST CHAPTER FM REPORT

In November we held a fall symposium entitled *The Mineralogist Toolbox* at the State University of West Georgia in Carrollton, Georgia. In addition to FM members, outgoing president Dave Babulski attracted several area middle school teachers who wanted to learn mineral identification techniques. The symposium began with Dr. Henry Barwood, now at Troy State University, giving an overview of X-ray diffraction techniques. Optical means of identifying minerals was covered by Julian C. Gray, a Ph.D. student from Georgia State University. Anita Westlake, of Emory University, gave a wonderful review of feldspar mineralogy. And the final presentation was by Dr. Dave Babulski who had what he called an actual mineralogist's toolbox in which he had various chemicals and pieces of test equipment for spot chemical test. Dave discussed his kit then finished with demonstrations of blowpipe techniques.

Plans are moving along for our next fall symposium, which will be held on November 8. The subject is of the symposium is Phosphate Minerals of the Southeastern United States. Speakers so far are Jason Smith, Henry Barwood, Bob Cook (schedule permitting), Travis Paris, and two other speakers to be named soon (their topics are chosen, but not the person to present). Topics include Foote Mine Minerals, Graves Mountain, Tennessee phosphate minerals, Lynch's Station turquoise, and Indian Mountain. The location and other details will be announced in future newsletters or you can contact me directly (jcgray@gsu.edu or (770) 973-3632) for details. Please contact me immediately if you have a topic appropriate to the subject matter. Also contact me if you can help with the planning and implementation of this symposium.

In other news, I am examining ways to affiliate with regional mineralogical societies to boost membership, advertise our activities, and provide opportunities for outreach.

Submitted by Julian C. Gray, President, SouthEast FM Chapter.

Symposia

PACIFIC NORTHWEST CHAPTER SEPTEMBER 2003 SYMPOSIUM

September 26-28, 2003, Red Lion Inn, Kelso, Washington (40 min. north of Portland, OR).

Recently improved trade relations with China have been a boon to mineral collectors as some truly spectacular finds have been discovered and made available to museums and collectors. Hence, this year's symposium highlights the "Minerals of China". Saturday's featured speakers include Rock Currier and Bob Cook who will be discussing, among other things, the evolving mineral market in China. The Sunday program will include sessions on digital photography and updates on "What's New in the Northwest".

Additional show highlights include floor dealers offering the latest finds on the mineral market, satellite dealers featuring professional dealers and Northwest collectors, and mineral displays with spectacular specimens from Northwest private collections. Other activities include the micromineral program on the main floor, contests, Saturday evening banquet, and the annual benefit auction.

For registration info, please contact Aaron & Jade Wieting at pdxpounder@hotmail.com

Submitted by Aaron B. Wieting, Vice-President, Pacific NorthWest FM Chapter.

Mineral Notes

ANNUAL AWARDS AT THE TUCSON GEM AND MINERAL SHOW

The Friends of Mineralogy annually presents six awards at the Tucson Gem and Mineral Show. The awards are presented at the Saturday night banquet (February 15 this year). The winners were:

- Best Article 2002, *Rocks and Minerals*, Dan Kile
- Best Article 2002, *The Mineralogical Record*, Jesse Fisher
- Best Educational Case, TGMS, 2003 – Individual, Georg Gebhard
- Best Educational Case, TGMS, 2003 – Institutional, Virginia Tech
- Werner Lieber Photo Contest – Professional, Saul Krotki
- Werner Lieber Photo Contest – Amateur, Gene Reynolds

In conjunction with the awards for Best Article FM presents a check for \$200 to *Rocks and Minerals* and also to *The Mineralogical Record*. Congratulations to all winners!

NEWRY MINERAL PARK

Perhaps you have read that the Maine Geological Survey has launched a fund-raising drive to purchase the Newry Mines located in the Oxford Hills of Western Maine, for use as a permanent recreational mineral collecting park. I have made a donation and I urge you to do the same. Your donation should be sent by check payable to "Newry Mineral Park" and mailed to: Newry Mineral Park, c/o Maine Geological Survey, 22 State House Station, Augusta, ME 04333-0022.

EARTH SCIENCE WEEK 2003

ALEXANDRIA, VA - The American Geological Institute (AGI) has officially initiated planning for Earth Science Week 2003 by announcing this year's theme, "Eyes on Planet Earth: Monitoring Our Changing World." Earth Science Week 2003 will be celebrated October 12-18, and will have four national contests that are associated with the theme. The contests include a Visual Arts contest for elementary-school children, an Essay contest for middle- and high-school students, a Photography contest open to the public, and a Lesson Plan Design contest for teachers. For up-to-date information on Earth Science Week activities, visit <http://www.earthsciweek.org>.

The "Eyes on Planet Earth" theme focuses on the important work performed every day by geoscientists throughout the world. Using observations and measurements from instruments in space, under water, and on the ground, geoscientists constantly evaluate the Earth's present state, make predictions about how it will change in the future, and assess the effects of Earth's changes on life and society.

The national contests hosted by AGI are designed to inspire citizens to get involved in Earth Science Week. Entries in the Visual Arts, Essay, and Photography contests must be received by October 1, 2003, and a Grand Prize winner in each contest will receive a cash prize of \$300. Elementary-school students in grades K-4 are eligible to participate in the Earth Science Week Visual Arts contest. Drawings, paintings, or other two-dimensional artwork depicting the topic, "Earth Science in Your World," will be considered. Winning entries in this category will be displayed at AGI and at the national headquarters of the U.S. Geological Survey near Washington, DC.

The Earth Science Week Essay contest is open to students in grades 5-12. Entitled "Your Career as an Earth Scientist," entries are limited to 500 words and are to be creative works that describe a geoscience career they might like to have. The First Prize essay will be published in a future issue of *Geotimes* magazine and finalists will be featured on the Earth Science Week web site.

Contestants of all ages are invited to submit photographs to the Earth Science Week Photography competition. Entries should capture next year's Earth Science Week theme, "Living on a Restless Earth: Natural Hazards and Mitigation." Winning photograph will be used in the 2004 Earth Science Week logo.

Earth Science Week 2003 celebration marks the sixth year for this annual event, which is hosted by AGI as a service to the public and the geoscience community. The week was established to give students and citizens new opportunities to discover Earth sciences and to encourage stewardship of the Earth. It highlights the important contributions that Earth and environmental sciences make to society and invites the public to become engaged in current scientific exploration. AGI launched Earth Science Week in 1998 as the culminating event celebrating the Institute's 50th anniversary.

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Friends of Mineralogy, Inc., is composed of members of 7 local chapters, plus national members not affiliated with a chapter. **Prospective national members should send their application and \$10.00/year dues to Jim Hurlbut, 2240 S. Adams St., Denver, CO 80210-4912. Phone 303-757-0283.** Prospective members of a chapter may submit form directly to the chapter contacts (Colorado, Midwest, Pacific NW, Miss. Valley, SouthEast, Pennsylvania, or Southern Calif.), to Jim Hurlbut who will forward it to the appropriate chapter. (You will be billed for your chapter dues, since they vary with individual chapters.)

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Friends of Mineralogy, Inc., is affiliated with *The Mineralogical Record* Magazine, The Mineralogical Society of America, and the American Geological Institute.

Please Note: Dues are past due as of April 1. If you haven't paid your dues yet, please do so now. Please fill out and send in this form along with your dues. Former members of FM are strongly encouraged to re-join.

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