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Los Alamos
NATIONAL LABORATORY
Ideas That Change the World

NewsLetter

Week of June 23, 2003 **Vol. 4, No. 13**

The oldest known fossil of modern humans, dating back 160,000 years. *Photo © 2000 David L. Brill/Brill Atlanta*

Lab researcher part of team that finds immediate predecessor of modern humans

by James E. Rickman

An international team of scientists, including a researcher from the Laboratory, geologist Giday WoldeGabriel of Hydrology, Geochemistry and Geology (EES-6), has discovered fossilized skulls that lend further credence to the hypothesis that modern humankind originated in Africa.

The discovery, highlighted in two companion papers earlier this month and as the cover story of the journal Nature, also indicates that this ancient predecessor of modern man conducted early mortuary practices on their deceased contemporaries and may have dined on hippopotami.

The international team, known as the Middle Awash Research Group, discovered fossilized skulls of two adults and a child who lived 160,000 years ago in what is now the Afar Region of northeastern Ethiopia. The age of the fossils makes them the world's oldest near-modern humans, meaning that they are a subspecies of Homo sapiens — modern man. Researchers named the new subspecies Homo sapiens idaltu (idaltu means "elder" in the Afar language).

The team found skull, tooth and bone fragments as well as an entire cranium in sediments near Herto village in 1997. It took researchers years to successfully reconstruct and stabilize the fossilized remains.

One of the adult skulls and the child's skull bear marks indicating that they had been altered by stone tools. The child's skull shows evidence of polishing, perhaps from repeated handling, in an area where the base of the

continued on Page 7

Regents name Robert Dynes new UC president

Robert C. Dynes was named the new president of the University of California earlier this month. Dynes is the UC system's 18th president. He currently is chancellor of the UC, San Diego, campus.

He will become UC president Oct. 2, replacing Richard Atkinson, who is retiring after eight years as UC president.

Dynes was selected from a national pool of more than 300 candidates. The recommendation was made by a regental selection committee that was assisted by advisory committees of faculty, staff, students and alumni.

"Bob Dynes is an outstanding individual who will provide superb leadership to maintain the quality and accessibility of the University of California," said John J. Moores, chairman of the Board of Regents. "He brings the perfect mix of skills and experiences to tackle this demanding job. I appreciate the input of all who participated in the selection process, and I am particularly grateful to the faculty for the important role they played in our deliberations."

At the regents meeting in Oakland, Dynes pledged his commitment as president to high-quality teaching, research that serves the public interest, expanded educational opportunity and institutional accountability.

"I am elated by the prospect of taking the helm of the premier university in the world, a place where the very best come to study, to work and to learn," Dynes said. "Sustaining the quality of the UC system will be my priority and my privilege as president."

University of California President Richard Atkinson, left, congratulates UC San Diego Chancellor Robert Dynes following the June 11 announcement of Dynes' selection as the next UC president. Atkinson, who is retiring, turns over the helm of the 10-campus system to Dynes Oct. 2. *Photo courtesy of the UC Office of the President*

Inside this issue ...

Los Alamos NewsLetter

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Los Alamos enhances global security by ensuring safety and confidence in the U.S. nuclear stockpile, developing technologies to reduce threats from weapons of mass destruction and improving the environmental and nuclear materials legacy of the Cold War. Los Alamos' capabilities assist the nation in addressing energy, environment, infrastructure and biological security problems.

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FROM THE TOP

Never compromise safety and security


Interim Laboratory Director Pete Nanos

The subjects of safety and security are, as many of you already know, very near and dear to my heart. It would be impossible to spend a career in the surroundings of the U.S. Navy without a strong commitment to both, and here at Los Alamos National Laboratory, it's equally, if not even more, important.

The work we do here involves chemicals, heavy construction, high explosives and nuclear materials, to name only a few of the hazards found at the Laboratory. And our every day work involves the nation's security, a responsibility that requires the utmost attention to the details of protecting the nation's secrets.

No one comes to work in the morning with the thought in his or her head that, "Today, I think I'll go to work, be careless and hurt someone," or "Gee, wouldn't it be fun to leave my safe open and all the doors unlocked." I know these absurd statements are probably bringing a smile to some who are reading this article. However, the actions addressed in both — allowing carelessness to result in injury or lax attention to security requirements to potentially compromise classified information — do happen here.

The rate of security occurrences, which encompasses the full range of severity levels from minor to extremely serious, is running nearly double that of 2002. That's a trend we must reverse and reverse now. We're also seeing incidents where the failure to use common sense and the Integrated Safety and Security Management process is causing harm to Laboratory employees and subcontract workers.

In any incident that causes injury, I'm tasking a member of the Senior Executive Team to chair the review board. And the final reports will come to me. Believe me when I say that you do not want to be sitting across the table, explaining why your careless actions seriously hurt another person.

This pledge is at the heart of ISSM: I will never compromise safety or security for programmatic or operational needs. Please remember and follow it.

by Judy Goldie

In a short time, we will be celebrating the birth of our nation. Tradition dictates that we set off fireworks to mark the occasion. This year, however, the fire danger in the area is so severe that roman candles, cherry bombs and sparklers may well be prohibited. In Los Alamos, for example, all those and firecrackers and rockets are banned. Just in case you do find occasion and the law permits, here are some guidelines to keep you safe from the Consumer Product Safety Commission and the National Council on Fireworks Safety.

It is extremely important to know the difference between a legal firework and a dangerous explosive device. Items such as M-80s, M-100s and "blockbusters" are not fireworks; they are federally banned explosives. They can cause serious injury or even death. Stay away from anything that isn't clearly labeled with the name of the item, the manufacturer's name and instructions for proper use.

Fireworks are not toys. Fireworks complying with strict regulations enacted by the U.S. Consumer Product Safety Commission in 1976 function primarily by burning to produce motion and visible or audible effects. They are burning at approximately the same temperature as a household match and can cause burn injuries and ignite clothing if used improperly.

Never give fireworks to young children. Close, adult supervision of all fireworks activities is mandatory. Even sparklers can be unsafe if used improperly.

Select and use only legal devices. If you choose to celebrate the Fourth of July with fireworks, check with your local police and fire department to determine what fireworks can be legally discharged in your area. If you are aware of anyone selling illegal devices, contact your local police department.

Homemade fireworks are deadly. Never attempt to make your own devices, and do not purchase or use any kits that are advertised for making fireworks. Mixing and loading chemical powders is very dangerous and can kill or seriously injure you. Leave the making of fireworks to the experts.

Illegal fireworks continue to be a serious problem. Over the past 10 years, 25 to 30 percent of the injuries associated with fireworks have typically been caused by illegal explosives or homemade fireworks.

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memorandum

Editor's Note: The following memo was sent to Laboratory leaders May 30 by Associate Director for Threat Reduction Don Cobb.

We have been working on this for several months in anticipation of Terry Hawkins' new assignment in the Director's Office. The following outlines the separation of NIS [Nonproliferation and International Security Division] into two new divisions — Nuclear Nonproliferation (N) and Proliferation Detection and Monitoring (J).

In view of Terry Hawkins' departure from NIS Division leadership to the Director's Office, it is time to reassess NIS Division's ability to respond to the growing threat-reduction mission at the Laboratory. Threat Reduction and NIS leadership have done this in a series of "stocktake" meetings held with NIS managers and staff and other program managers in March and April. As a result of this assessment, I have decided to separate NIS into [the previously mentioned two new divisions].

The Nuclear Nonproliferation (N) Division will consist of personnel and programs currently residing in NIS groups 5 through 9 and the NIS Nonproliferation Program (NP) Office. The new N Division will play a total end-to-end role in supporting nuclear nonproliferation, homeland security and emergency response and will have close linkages with the Threat Response Operations (TRO) Office and the new Center for Homeland Security (CHS).

The Proliferation Detection and Monitoring (J) Division will consist of NIS groups 1 through 4 and 10 and the IT [International Technology Program], RD [Research and Development Program], and CSSE/NASA [Center for Space Science and Exploration] Program offices. The new J Division will be a national center of excellence in developing new sensors and detection systems as well as new tools to find and characterize covert threats related to the production and possible use of WMD. It will have close linkages with the DoD [Department of Defense] Program Office and the Laboratory's initiative in support of defense transformation.

The two divisions each will represent approximately 400 people and a budget approaching $100 million. I have directed that job postings be placed immediately to recruit the new division leaders of N and J divisions. I expect the transition to take most of the summer. In the meantime, Cliff Giles will be the acting NIS Division leader.

Threat Reduction Leadership team includes Giles, Weber

by Nancy Ambrosiano

The new Threat Reduction principal deputy associate director is Joseph "Cliff" Giles. The selection was announced recently by Associate Director for Threat Reduction Don Cobb. "Giles has worked in nonproliferation and related programs at the Laboratory for 13 years, most recently as principal deputy division leader in the Nonproliferation and International Security (NIS) Division," said Cobb. "Cliff's experience and knowledge make him exceptionally well qualified for his new assignment." Giles takes his new title immediately, and his initial assignment is to serve as acting division leader for NIS.

In addition, Cobb announced the selection of Paul G. Weber as deputy associate director for defense science and technology. Weber will transition from his current post as division leader for the Earth and Environmental Sciences (EES) Division in early June.

"Weber is an excellent choice to help develop and expand the Laboratory's technical support to the Department of Defense, Department of Energy, related government agencies and the military. He has an exceptional scientific and technical background to take on this challenging assignment. The Department of Defense is moving to transform the nation's defense capability to meet new threats to our national security. Scientific and technical innovation will be a hallmark of this transformation. As a leader in one of the premier national security science and technology laboratories, Weber will lead and help guide the Laboratory's efforts in supporting the transformation of our nation's defenses," Cobb said.

Division Leaders Project on the 'Path Forward'

by Bill Dupuy

Following hard on the success in creating the Group Leaders Action Council, plans have moved ahead for a similar process to identify opportunities division leaders may employ to propel the Laboratory faster along what Interim Director Pete Nanos calls "The Path Forward."

The Division Leaders Project already has gotten the go-ahead from the Senior Executive Team.

Project team members

- Tim Babicke, Diversity Office (DVO)
- Micheline Devaurs, Decision Applications (D) Division
- Bill Feiereisen, Computer and Computational Sciences (CCS) Division
- Paul Follansbee, Materials Science and Technology (MST) Division
- Allen Hartford, Science and Technology Base Programs (STB) Office
- Paul Lisowski, Los Alamos Neutron Science Center (LANSCE)
- Lee McAtee, Health, Safety and Radiation Protection (HSR) Division
- Al Sattelberger, Chemistry (C) Division
- Susan Seestrom, Physics (P) Division
- Donna Smith, Industrial Business Development (IBD) Division
- Steve Yarbro, Nuclear Materials Technology (NMT) Division
- Bill Wadt, Quality Improvement (QIO) Office

Staff

- Ronnie Cohen, Human Resources (HR) Division
- Pam French, P Division
- Rebecca Phillips, HR Division
- Mary Anne Yates, Threat Reduction Directorate (ADTR)

First among the actions is to establish and empower a standing Division Leader Council to resolve business, program and policy issues and to work with the SET in developing and deploying Lab strategies, said Susan Seestrom, Physics (P) Division leader and spokesperson on the project that comprises a team of 11 division leaders.

"Division leaders operate in a complex milieu," Seestrom said, "with a range of relationships and responsibilities. They vary from local and national DOE/NNSA programs and compliance, to work arrangements with other divisions, to obligations to senior management as well as to the division work force and to outside influences such as community leaders and the media."

Their diverse roles and responsibilities concerning the Lab's mission, the division's operations and management oversight add further complexity, she said.

As a result, Seestrom said, division leaders too often see their actual involvement in strategic development as low when they believe it should be high. What's more, they believe their tactical responsibilities are frequently too high on a scale of priorities when bigger issues should demand their best time and effort.

In this atmosphere, division leaders say they wind up developing their own strategies and priorities in ways that may conflict with what other divisions are doing.

Importantly, she said, division leaders sense a lack of a defined and articulated Labwide strategy that links to division decisions, objectives and measures. In this regard, they perceive annual planning as being less effective than multiyear planning in developing overarching Lab and division strategies — the so called "big picture."

To meet that need, the SET plans to involve division leaders in the strategic planning process in mid-July.

Once officially chartered, this council also will focus on resolving business and program issues, such as development of a pricing strategy and costing model for uniform use and the development and implementation of Labwide policies.

Among other recommended actions for the Council is finding ways to nurture relationships with customers and suppliers and between support and technical organizations. The notion of a "shared fate" among all parties is central to the project, she said.

Nanos already has laid out his vision for these relationships in all-employee meetings and in small-group meetings around the Lab. It all boils down to mutual respect and understanding of one another's job he has said.

It's just this type of behavior that the SET and division leaders would like to embed throughout the institution, said Seestrom. The SET is charged with developing the initial set of behaviors that should be employed Labwide, and the Division Leaders Council will have the responsibility of developing the method for modeling them at every level, she added. They also will work with the Director's Office in adopting a structured decision-making process and format for institutional issues.

A copy of the SET presentation is available from the Path Forward Web site at *int.lanl.gov/communications/index.shtml*.

Ombuds triage is 'in the field'

by Judy Goldie

Help is close by now that the Ombuds Council members are on site at both Technical Area 55 and at the Chemistry and Metallurgy Research (CMR) building. This pilot program provides services to the Nuclear Materials Technology (NMT) Division, but the program may be expanded to other divisions, said Jack Foley, associate ombudsman and program manager for the council.

Working hand in hand with the Ombuds Program Office, the Ombuds Council is made up of employees who are trusted by employees and management and who are known for their ability to solve problems while maintaining confidentiality and neutrality. These part-time volunteers keep their regular jobs but are available to employees at their work sites to brainstorm options, make referrals and act as a go-between to improve communication. They also provide feed back to managers about what the work force is thinking.

This outreach effort aims to reduce the number of issues prematurely elevated to higher levels of management or formal complaint processes, therefore resolving concerns at the lowest possible level, early on before they worsen.

From his experience in the Ombuds Program Office, Foley expects about half of the issues brought to the council to involve conflicts between employees or employees and their supervisors; about a quarter to be about personnel actions, such as salary and performance appraisals; and another quarter of the issues to be requests for policy information or for referrals to other Laboratory services. While the council's services do not substitute for other services available to the Laboratory work force, a council member can discuss with an employee the best route for resolving a concern.

The Ombuds Council members were selected based on their ability to stay neutral and maintain confidentiality. Each also has to abide by both a code of ethics and standards of practice.

The members of the NMT Division council include

• **Arsenio E. Martinez** of Actinide and Fuel Cycle Technologies (NMT-11): Martinez is a project-delivery manager who has been at the Lab since 1976. He is at TA-55, Building 66, Room 221. His phone number is 5-7050. Martinez said he feels by serving on the Ombuds Council, he can "assist the Lab in making this a better place to come and work." He added that he can help people resolve perceived or real impediments to progress. In addition, he has taken conflict resolution and mediation training and has a degree in management and bachelor's of science degree in computer science.

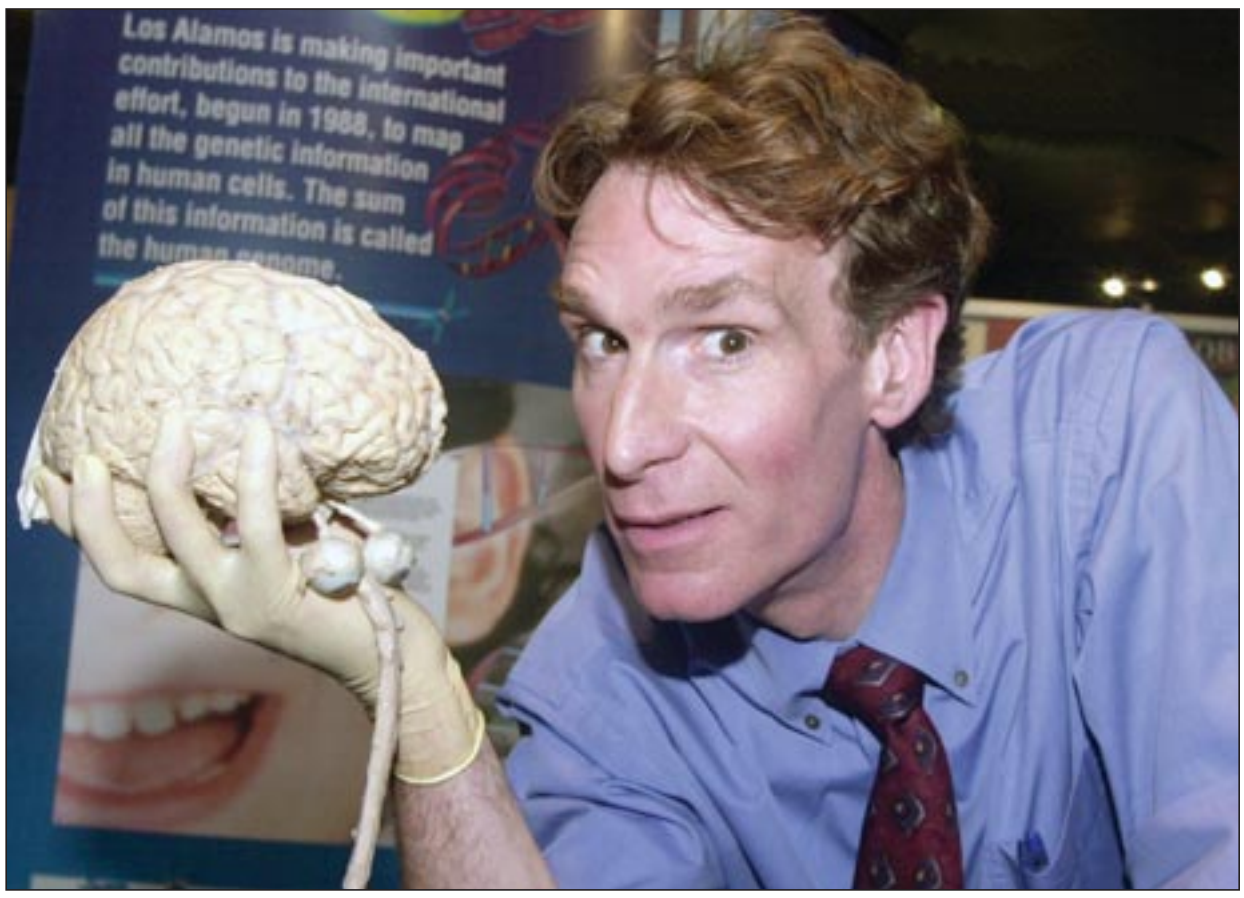
• **Bill McKerley** of NMT-DO: McKerley is a technical staff member with 25 years at the Lab, all but six with NMT. He is currently a project leader and has 10 years of experience as a group leader. He is at the CMR Building; his phone number is 7-2342. McKerley said, "The Lab has been good to me and has provided me with a number of opportunities. I believe that in offering to serve in this capacity, I can make a positive contribution back to the Lab."

• **Victor J. Salazar** of NMT-DO: Salazar is a team leader in the CMR Ops Center. He has been at the Lab for 25 years. His phone number is 7-1780. Salazar said that "Now that morale at the Lab is at an all-time low, we employees need to be able to have someone to turn to for advice. I think with my 25 years at the Lab and my supervisory experience, I will be able to reinforce a positive work ethic."

• **Rudy J. Valdez** of Authorization Basis (NMT-14): Valdez is a technical staff member with two years' experience in NMT. He also was the lead Department of Energy Facility representative for TA-55 operations for five years previous to coming to the Lab. He is at TA-55, PF-66, Room 110. His phone number is 7-6400. Valdez thinks that "NMT employees would seek me out because they have known me for some time ... as the DOE facility representative ... I got to know several NMT staff from division leader to NMT technician to KSL craftsmen." Valdez was a DOE employee-concerns-program manager.

For more information on the Ombuds Council program, contact Foley at 5-6031 or at *jackfo@lanl.gov* via e-mail.

Two heads are better than one



Bill Nye "the Science Guy" picks the brain, or rather picks up a brain, during a recent visit to the Laboratory's Bradbury Science Museum downtown. The brain, which has the spinal cord, and optic nerves and eyeballs still attached, is a popular display item at the museum. Nye was at Los Alamos earlier this month to meet Laboratory technical staff members who are working on fuel-cell technology and transportation simulation and modeling. While at Los Alamos, Nye took a spin on a fuel-cell-powered cart and toured several Lab facilities. Nye is developing a science show for adults modeled after his popular "Bill Nye the Science Guy" show on PBS television. *Photo by LeRoy N. Sanchez*

Be part of the solution

Group leader input needed

DPIP
Director's Performance Improvement Program

by Judy Goldie

In an effort to garner group leader ideas, suggestions and recommendations, the Group Leader Action Council (see sidebar) held its first town hall meeting June 5.

Communication was the theme of the town hall meeting: GLAC Chairman Geoff Reeves of Space and Atmospheric Sciences (NIS-1) told of the council's history, accomplishments and ongoing projects, but just as importantly, encouraged feedback from group leaders regarding GLAC's initiatives and urged further group-leader participation on GLAC task forces and initiatives.

One of immediate interest was a dry-run of the GLAC-recommended "boot camp," group-leader training held earlier this month. Training and Development (HR-T&D) has put much effort into its design, and GLAC needs group leaders to participate in the dry run — any module or for any time their schedules permit, not necessarily for the entire dry run — to harvest comments and suggestions, said Audrey Archuleta of Communication and User Coordination (LANSCE-4) who is heading up this GLAC initiative. It was crucial to have group leader comment, she added. The group leaders attending the dry-run found the "boot-camp" training to be a very good start in addressing new-group-leader needs. Those attending provided extensive feedback to HR-T&D and the subject-matter experts that contributed to the content and should greatly enhance the final product, said Archuleta. The first "boot-camp" module, a full-day orientation component, is scheduled to pilot late this month.

Training that meets group-leader needs and six other recommendations from about 40 identified issues were presented to the Senior Executive Team in February. Recommendations being implemented include the establishment of a group leader problem-solving action council, the formation of the GLAC; more clearly defined and endorsed roles and responsibilities for group leaders; group-leader flexibility to structure staffing support – creating the assistant group leader position; and a defined, clear chain of responsibility for taking group leadership.

In progress are recommendations to create an office that reports to the SET that will streamline, clarify and evaluate policy (the Director's Performance Initiative Program's Policy Office Project) and another to develop a centralized problem-solving resource with "service-desk" and "help-desk" functions.

Reeves noted that this initial set of recommendations was not necessarily the one with the highest priority, but contained those that could be worked immediately.

Currently, GLAC has members on the Business Policy, Process and Practice (BP3) committee chartered by Associate Director for Administration Rich Marquez. BP3 is working on such issues as the business stewardship reports, changes to the purchase-card policies, local-vendor agreements, and time and effort reporting. More group leader representation is needed. Contact Archuleta of LANSCE-4 to volunteer.

In addition, John Bliss of Health Physics Operations (HSR-1) is the GLAC interface on the Enterprise Project. Reeves is heading a GLAC task force looking into how to cover unfunded technical staff; Martin Cooper of Subatomic Physics (P-25) is heading the Program Development task force; and Debra Bennett of Actinide and Fuels Cycle Technologies (NMT-11) is heading one on work control and authorization. All welcome group-leader input and hands-on participation.

Originally part of DPIP Element 3, Human Resource Systems, the council arose from Interim Director Pete Nanos' "group-leader focus" for improving business practices at a group level and for ensuring that problems and issues of concern do not get dropped, forgotten or not communicated. A large team of group leaders worked on this charge and a subset of that team presented the aforementioned recommendations to the SET in February.

Human Resources (HR) Division chose the initial members of the GLAC. Seven members will rotate off the council after a six-month term in September, and a call will be put out for replacements. Membership will continue to be staggered. Deputy Director for National Security John Immele is the GLAC champion.

To raise issues; voice concerns, suggestions and comments; or to participate in ongoing GLAC activities, contact any member of the council or e-mail the council at *glac@lanl.gov*. In addition, the Path Forward Web site contains GLAC information at *http://int.lanl.gov/communications/acting.shtml* online.

GLAC members and contact information

- Geoff Reeves (Chair), NIS-1, *reeves@lanl.gov*
- Audrey Archuleta, LANSCE -4, *ala@lanl.gov*
- Deborah Bennett, NMT-11, *dbennett@lanl.gov*
- John Bliss, HSR-1, *johnb@lanl.gov*
- Martin Cooper, P-25, *mcooper@lanl.gov*
- Harry Dewey, Advanced Chemical Diagnostics and Instrumentation (C-ADI), *hd@lanl.gov*
- Bill Gillison, Security Plans and Programs (S-1), *gillison@lanl.gov*
- Sandy Haire, Benefits (HR-B), *shaire@lanl.gov*
- Larry Hersman, Langham Resource (B-2), *hersman@lanl.gov*
- Kim Mousseau, Advanced Information and Business Application Development (IM-8), *mousseau@lanl.gov*
- Chad Olinger, Safeguards Systems (NIS-7), *colinger@lanl.gov*
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- Carol Sutcliffe, Tritium Science and Engineering (ESA-TSE), *carols@lanl.gov*
- Eloisa Michel (admin support), NIS-1, *emichel@lanl.gov*

Harry Thomas (facilitator), HR-TD, *hthomas@lanl.gov*

Dr. William Brady

William Brady to head up Occupational Medicine

Dr. William Brady is the newly appointed medical director and group leader for Occupational Medicine (HSR-2).

"Los Alamos National Laboratory offers a unique opportunity to advance the field of occupational medicine in the areas of protecting workers from radiological, chemical and biological hazards. It also provides the opportunity for me to work with one of the finest medical departments within the Department of Energy's complex," said Brady.

Brady is board certified in occupational medicine and has clinical and management experience in both private and government sectors, including the establishment of a private company that developed clinics for occupational and family medicine and drug-abuse programs, said Lee McAtee, division leader of the Health, Safety and Radiation Protection (HSR) Division.

Brady's previous experience includes serving as medical director and vice president of Medical Affairs and Health Services in Hanford, Wash. He is chairman of the DOE Medical Directors Steering Committee and a member of the advisory committee of the Rocky Mountain Center for Occupational and Environmental Health. He also serves on the faculties of the University of Washington and the University of Utah.

Brady has a master's degree in health administration and business administration from the University of Colorado, a master's degree in public health from the University of Utah and a medical degree from Texas A&M University.

Luce to serve three-year term on NISO board

Research Library Director **Richard Luce** has been re-elected to another three-year term on the board of directors of the National Information Standards Organization.

The nonprofit association, accredited by the American National Standards Institute, identifies, develops, maintains and publishes technical standards to manage information in a changing and ever-more digital environment, said Luce. He said NISO standards apply both traditional and new technologies to the full range of information-related needs, including retrieval, re-purposing, storage of metadata and preservation.

Luce is one of 15 members who serves on the board. He said he was nominated by about 120 peers from government, industry and private organizations.

Luce said the Lab's library shouldn't operate in a vacuum. And being a member of NISO allows the Laboratory to influence information standards and be in sync with other research facilities, he said.

Luce came to the library as director in 1991.

He has served as project leader of the Lab's Library Without Walls, a large-scale digital library. He received a Distinguished Performance Award in 1996 for contributions to technological innovations that support science and technology.

He also supports digital library and electronic publishing by holding numerous advisory and consultative positions. He was co-founder in 1999 of the Open Archives Initiative, a project that helps develop interoperable standards for self-archiving systems.

Luce currently is a senior adviser to the Max Planck Society's Center for Information Management, the University of California Digital Media Innovations Program and the UC Systemwide Library and Scholarly Information Advisory Committee.

Richard Luce

Matthews appointed member of DNFSB

Bruce Matthews recently was appointed by President George W. Bush as a member of the Defense Nuclear Facilities Safety Board. Matthews had been director for the Lab's Advanced Accelerator Applications Project and the leader of the Laboratory's Nuclear (NMT) Materials Technology Division from 1993 to 1999. To accept the DNFSB position, Matthews had to leave the Lab; he retired in April. Matthews noted that for a year he will have to recuse himself on any DNFSB matters regarding the University of California and its laboratories. Matthews said, "I am honored to be appointed to the DNFSB. The Board has performed an important role in helping to maintain safe operations at DOE [Department of Energy] nuclear weapons facilities; my experience with the management of nuclear facilities at Los Alamos will be an asset to helping protect the health and safety of the public and workers."

Bruce Matthews

Matthews came to the Laboratory in 1980 and worked at the TA-55 Plutonium Facility in the old CMR Division. In 2000, Matthews received a Senior Scientific Manager Return to Research grant at the University of California, Santa Barbara.

Matthews has more than 30 years of experience in nuclear technologies with a primary focus on special nuclear materials and nuclear reactor fuels. In addition, Matthews has managed nuclear facilities including construction, regulatory compliance, integrated safety management, and safeguards and security.

Before coming to the Lab, Matthews worked as a research scientist at Atomic Energy of Canada and the Pacific Northwest Laboratory. Matthews received a bachelor's degree in metallurgy from Pennsylvania State; a master's degree in materials science from the University of Denver; and a doctorate, also in materials science, from the University of Wales. Matthews is a fellow of the American Nuclear Society.

The Defense Nuclear Facilities Safety Board is an independent federal agency established by Congress in 1988. The board's mandate under the Atomic Energy Act is to provide safety oversight of the nuclear weapons complex operated by the Department of Energy.

Mangeng honored by Women's Diversity Working Group

Carolyn Mangeng

Acting Deputy Director **Carolyn Mangeng** has been recognized by the Women's Diversity Working Group as a great mentor and outstanding role model. In support of its theme, Women Pioneering the Future, Mangeng was honored by the WDWG with a special mentor award on June 24 at Fuller Lodge.

"Carolyn is a prime example of a manager/mentor who is never too busy to teach, inspire and support. Her devotion to WDWG initiatives has been unmatched," said Maryrose Montalvo of the Nuclear Materials Technology Division Office (NMT-DO). "Her willingness to take the time from her busy schedule to encourage all to do their best and to recognize those efforts is rare, especially at her level. She has provided WDWG with the determination, knowledge and inspiration to take on a variety of challenges facing today's women in the work force."

Mangeng acts as an inspiration through her work and devoted service to others. She has held several volunteer positions, including membership on The Women's Committee in the 1980s. She served on its Child Care Task Force, which worked on providing child care for Lab employees nearly 20 years ago.

"I am truly honored by this special award. But this recognition is more than an honor for me because it calls attention to the importance of mentoring in the workplace," said Mangeng. "The WDWG does a great service every year by shining the spotlight on a few of our mentors and on the value of mentoring. Nurturing and guiding our employees is absolutely critical to the Laboratory's future."

Mangeng, who came to the Lab in 1976, has held positions such as deputy program director for Nuclear Weapons technology, deputy associate Laboratory director for the Nuclear Weapons Directorate and associate deputy director for National Security. She has a bachelor's degree from Cornell University and a master's degree from Northwestern University.

June employee service anniversaries

35 years
Robert Hotchkiss, X-8
Maxie Kelly, TRO
Roger Stutz, NIS-DO

30 years
Richard Keller, B-2
Ralph Martinez, FWO-DECS
Victor Martinez, X-4
Donald Salazar, NIS-3
Cathy Stallings, CCN-5
Gerald Strickfaden, NIS-9
Donald Temer, C-AAC

25 years
Michael Banaszek, LANSCE-2
James Blacic, EES-11
Rod Christensen, NIS-3
Clarence Duffy, C-INC
Michael Fletcher, DX-2
David Gallegos, MST-6
Terry Hahn, C-AAC
W. Ted Hunter, SNS-03
N. Jacques-Martinez, HSR-1
Nathaniel King Jr., BUS-4
Carol Ladelfe, EES-11
Richard Less, MST-6
Stephen Levings, ESA-WMM
Mark MacInnes, B-1
Fredie Marshall, CCN-5
Leonard Martinez, IM-1
Charles Montaño, BUS-DO
Yvonne Montoya, HSR-12
Carl Ostenak, S-DO
Edward Partridge, LANSCE-5
Clement Pond Jr., IM-8
Anthony Porto, ESA-WMM
Richard Prael, X-5
Robert Pruner II, FWO-CMR
Gary Rich, CCN-7
Cora Roybal, ESA-WMM
Mary Ruminer, IM-1
Elmer Salazar, IBD
Roberta Salazar, SNS-DO
Gary Secrest, ESA-WMM
William Spencer, DX-3
Barbara Stine, ADO
Michael Stout, MST-8
R.B. Strittmatter, NIS-7
Daniel Strottman, T-DO
Paul Trujillo, FWO-IIM
Charles Wingate, X-3

20 years
Carlos Cabildo, CCN-4
Kenneth Chidester, NMT-11
William Coulter, DX-5
Theresa Cull, HSR-5
Ronald Dolin, CHS
Jo Fowler, DX-DO
Rebecca Johnson, EES-IGPP
Andrew Lawson, MST-8
Christina Lynch, NMT-14
Joseph Martz, MST-DO
Mary Ellen Ortiz, CER-30
Joseph Pilat, NIS-7
Dennis Remelius, C-ADI
Debbie Rodella, MST-6
Marvin Sanchez, CCN-4
Cathy Schuch, C-DO
Harold Sullivan, D-5

15 years
Ileana Buican, STB-DSTBP
Wolfgang Dworzak, NMT-11
Shirley Herrera, IM-8
Emily Johnson, HSR-2
Robert Kelly, P-22
David Knapp, FWO-WFM
Benjamin Lea, DX-1
Jon Nielsen, DX-4
Pallas Papin, MST-6
Ida Romero, PM-18
Peter Sheehey, X-4
Daniel Taggart, EES-12
Giday WoldeGabriel, EES-6

10 years
Stephen Betts, NIS-5
James Carey, EES-6
Stephen Costigan, HSR-1
Jon Dahl, CCS-4
Jacek Dziewinska, RRES-EA
Krystyna Dziewinska, NMT-5
John Ettinger, NIS-8
John Finn, T-15
Terry Holesinger, MST-6
Marybeth Lujan, NMT-3
John MacDonald, NMT-10
Frank Perry, EES-9
Joseph Rodriguez III, C-AAC

5 years
Dale Anaya, ESA-AET
Gerald Antos, CCN-5
Susan Bargeloh, HR-TD
Dana Berkeland, P-21
Elizabeth Bluhm, NMT-2
Carrie Borrego, NMT-3
Regina Cata, C-OPS
Dorothea Delapp, NIS-1
Karen Duran-Suazo, C-AAC
Marc Eberle, NIS-9
Eric Ernst, NMT-DO
Sherry Evans-Carmichael, NMT-7
Julian Grace, BUS-1
Carol Hogsett, HR-S
Albert Hutchinson, IM-8
Anders Jorgensen, NIS-4
John Kindinger, D-2
Richard Lance, BUS-2
Jennifer Lillard, MST-6
Escobedo Lopez, RRES-ECR
Donn Lucero, DX-1
Mary Lujan, FWO-TA-55
Joseph Lynch, DX-3
Mario Manzo, ESA-DE
Ryan Maupin, ESA-WR
Clifton Meyer, EES-2
Theodore Mockler, DX-5
Rodney Oldehoeft, CCS-1
Martin Parrales, NIS-5
Susan Post, CCN-8
Erin Powers-McKay, CCN-2
Katherine Prestridge, DX-3
Carla Robinson, NMT-7
Bernadette Salazar, ESA-AET
Tanya Sanchez, FWO-FIRE
Alexander Saunders, P-25
Bettina Smith, MST-7
William Stone, EES-6
Kenneth Suazo, ESA-WSE
Sunlung Suen, CCN-8
Stacey Talachy, NMT-16
Timothy Talley, NIS-7
Michael Taylor, EES-7
David Telles, S-1
Harry Thomas, HR-TD
William Vigil, MST-11
Gregory Von Harders, BUS-2
Gregory Wagner, B-3

Team finds ...

continued from Page 1

cranium was broken away. Anthropologists have found similar bone modifications in societies where the skulls of ancestors were preserved and venerated, leading the research team to believe that the marks are the result of a similar mortuary practice conducted by Homo sapiens idaltu.

WoldeGabriel, a co-leader of the research team, used geologic clues to characterize and describe the environment in which Homo sapiens idaltu lived. Although much of Europe was under ice as a result of major glaciation, the ancient hominids lived near the shore of a shallow freshwater lake that had been formed by major fault that blocked a river in the area. Fossils indicate that the lake was inhabited by abundant catfish, crocodiles and hippos.

In fact, it was a fossil of a butchered hippopotamus skull discovered by professor Tim White, one of the team's leaders from the University of California at Berkeley, that attracted the team to the excavation area where the skulls were found. Stone-tool marks on fossilized remains indicate that Homo sapiens idaltu at Herto had a taste for hippo, but researchers are unclear whether the hominids hunted the animals for food or scavenged them.

The Herto fossils have lent credence to the idea that modern man originated in Africa and spread throughout the world from there. The new subspecies is anatomically similar to modern humans. Previous to the Herto discovery, the oldest near-modern humans ranged from 90,000 to 130,000 years old and were found in Africa and the Middle East. The Herto remains predate the Middle Eastern remains by some 30,000 years.

But most significant to the research team, Homo sapiens idaltu is unmistakably a non-Neanderthal. As such, the Herto fossils indicate that near-humans had evolved in Africa long before European Neanderthals disappeared. Consequently, the Herto remains conclusively demonstrate that there never was a Neanderthal stage in human evolution and that Neanderthals were merely a branch of the evolutionary tree that later went extinct, according to professor F. Clark Howell of UC, Berkeley, a co-author of the Nature paper. The bones therefore lend further support to the "Out of Africa" hypothesis.

The Middle Awash Research Group has discovered a wealth of fossils in the Afar Region throughout the past decade. The group's finds include fossils of six early hominids of various ages from six million-to-one million years ago to the Herto fossils — the team's youngest find to date.

In Memoriam

Lawrie Eaton

Laboratory employee Lawrie Eaton of Tritium Sciences and Engineering (ESA-TSE) died June 10 at his home in Los Alamos. He was surrounded by his family, wife Cindy of Network Engineering (CCN-5) and daughters Jill, Kris and Jennifer. Eaton bravely fought recurring cancer with determination and humor. Eaton began his career at the Lab Sept. 29, 1986, in the then-AT-5 group. He earned bachelor's and master's degrees in electrical engineering from the University of Maine and a master's in business administration from St. Mary's College. He served as group leader for AT-5 from 1988 to 1994 when he joined ESA Division in ESA-TSE. He became group leader in 1997 and served in that role until illness forced him to step down.

Gerald "Jerry" Schmitt

Laboratory employee Gerald "Jerry" Schmitt, died suddenly of an apparent heart attack May 23. He was a member of Detonator Technology (DX-1) at the time of his death. Schmitt hired on to the Lab in April 1981 in the then-X-5 group. He was an amateur radio enthusiast, pilot, photographer and rescue scuba diver in addition to having numerous other hobbies. He is survived by his widow Barbara.

This month in history ...

June

1638 — The first earthquake in the United States to be recorded and described in writing occurs at 2 p.m. June 1 in Plymouth, Mass.

1895 — Caroline Willard Baldwin becomes the first women to earn a doctor of science degree at Cornell University, N.Y.

1939 — Enrico Fermi and Leo Szilard submit paper to "Physical Review" describing subcritical neutron multiplication in a lattice of uranium oxide in water, but it is clear that natural uranium and water cannot make a self-sustaining reaction. *

1940 — Franz Simon begins research on isotope separation through gaseous diffusion. *

1943 — Laszlo Biro patents the ball-point pen.

1943 — Working with cyclotron-produced plutonium, Emilio Segre determines that the spontaneous fission rate is 5 fissions/kg-sec. This is well within the assembly speed capability of a high-speed gun. *

1944 — John Von Neumann provides design breakthrough for the slow component for focusing. *

1945 — Gen. Leslie Groves meets with J. Robert Oppenheimer and William Parsons to plan delivery of atomic bombs to the Pacific theater. *

1949 — New Mexico Gov. Thomas Mabry signs Senate Bill 215, establishing Los Alamos County.

1980 — TV's first all-news service, The Cable News Network (CCN) debuts.

2003 — is National Safety Month, be sure to take time to participate in the Lab's Safety and Security Day 8 a.m. to 1 p.m. June 26 at Ashley Pond and Central Avenue. in downtown Los Alamos.

And this from the June 18, 1959, LASL Community News: "Perhapsatron S-5, newest and biggest of the Laboratory's doughnut-shaped experimental pinch devices, was scheduled to go into operation this week at Project Sherwood."

****Carey Sublette, "Chronology for the Origin of Atomic Weapons" from www.childrenofthemanhattanproject.org/MP_Misc/atomic_timeline_1.htm***

The information in this column comes from several sources including the online History Channel, Chase's 2002 Calendar of Events, the Newsbulletin and its predecessors, the atomic archive.com, Echo Vitural Center, Science & Technology and Real History Archives.

Friendship results in 'lab-to-lab' collaboration

by Edward Kellum

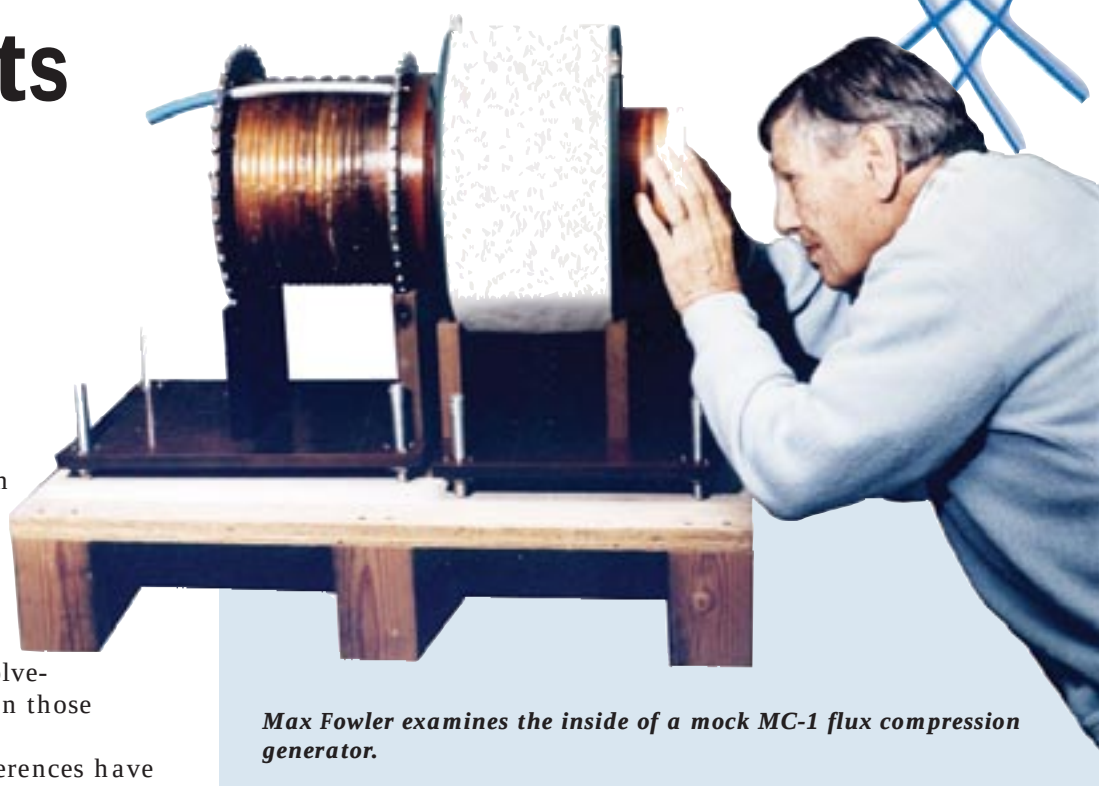
In 1952, working as a summer employee between teaching terms, retiree Max Fowler began his research at the Laboratory in the then-GMX Division, now the Dynamic Experimentation (DX) Division. Credited as the U.S. pioneer in explosive-driven magnetic-flux compression, Fowler has had a hand in many aspects of the field.

With more than 50 years of service to the Laboratory, Fowler recollects many fond memories, especially his involvement with magagauss conferences. "Life seemed simpler in those days," he commented.

Starting in Frascati, Italy, in 1965, the megagauss conferences have been the setting for international discussion in megagauss magnetic-field generation and applications, said Irv Lindemuth, special assistant for Russian Collaboration, Office of Associate Director for Weapons Physics. Fowler and his team co-authored the first paper presented at the Frascati conference and thus the first paper published in the megagauss proceedings series. Commenting on Fowler's role in the conferences, Lindemuth said, "He laid the foundation. Science benefits from open dialogue and ideas. By sharing and discussing experiences, we can get to the truth, and Max was integral to this process." Fowler said, "The conferences certainly opened up a lot of new friendships."

Fowler and his wife, Janet, have attended all nine megagauss conferences to date and are planning for the tenth. During a conference in Russia, Janet was so impressed with the country's people that she decided to learn Russian and became fluent in the language.

Fowler's friendships include one with Gennady Shvetsov of Novasibirsk that, in turn, led to friendship with Russian scientist Alexander Pavlovskii. This friendship facilitated the now well-known "lab-to-lab" collaboration that was established between the Laboratory and Arzamas-16 — the "Russian Los Alamos," now called Sarov. This partnership also led to the towns of Sarov and Los Alamos becoming international "sister cities." "The Russians respected Max and his work very much. We were standing on his shoulders," said Lindemuth.



Max Fowler examines the inside of a mock MC-1 flux compression generator.

The "lab-to-lab" collaboration led to the Dirac experiments that added many international ties. Fowler named the Dirac experiments after a British physicist Paul Dirac in part because the name also reflected the letters of Caird, or Robert Caird, a long time co-worker and friend who, at the time, was terminally ill.

"It has been a great ride. I have been very lucky to be able to work with such capable people and to be blessed with such excellent technical and administrative support. Everyone I have worked with had many strong points," said Fowler. His team and other Laboratory employees have made many investigations of material behavior in ultra-high magnetic fields. This work played a role in the selection of the Florida State/Florida/Los Alamos Consortium to develop the National High Magnetic Field Laboratory, Fowler added.

Fowler is a long time fellow of the American Physicist Society and was an early Laboratory Fellow appointee. He holds a bachelor of science degree in chemical engineering from the University of Illinois and a master's and a doctorate in physics from the University of Michigan. Fowler also received an honorary doctorate from Novosibirsk State University in Russia for his work in high-energy density physics and for furthering scientific relations between the United States and Russia.

Pictured at right are Janet and Max Fowler (seated) cruising on a ship between Moscow and St. Petersburg at the Megagauss-IX conference (July 2002). At rear is Fritz Herlach, organizer of the 1965 Megagauss-I Conference.

Below: In the late '60s, Max Fowler, second from right, sang bass in a barbershop quartet called the Stanley Steamers. Pictured with Fowler from left to right are Stan Marsh, tenor; Joe Fritz, baritone; and Jerry Morgan, lead. Fowler now sings in a group called the Senior Boomers.

Photos courtesy of Fowler

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