



# LS CO-AMP COMMENTARY

SPRING 2003

## Fort Lewis College CO-AMP Students Receive Support and Experience

*Dar Gurr, Admin. Asst., FLC CO-AMP*

Over the course of the last year, students involved in Fort Lewis College (FLC) CO-AMP have received continuous support and encouragement through FLC CO-AMP's research programs, academic awards, conferences & club support as well as specialized programs. One unique contribution of FLC CO-AMP is the tutor program, which provides organized tutoring and mentoring services for CO-AMP students majoring in Science, Technology, Engineering, and Mathematics (STEM) fields. Both the tutors and those receiving tutoring services are participating CO-AMP students. Additionally, FLC CO-AMP is involved in the Bridge Program, which provides high school seniors and junior college students with an introduction to four-year college life and provides a smooth and personal transition into college. Participating CO-AMP and AISES students are the mentors for this program.

Furthermore, the FLC CO-AMP also encourages and sponsors the FLC AISES chapter. In February 2003 the AISES chapter held a major event: The FLC 14<sup>th</sup> Annual AISES & Region III Conference at which the theme was "Learn from Yesterday, Live for Today, Hope for Tomorrow." The conference attracted over 200 Native American

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## CSU CO-AMP Award Luncheon

*Arlene Nededog, Director of Retention,  
CSU College of Natural Sciences*

An inaugural Award and Recognition Luncheon for Colorado State University's Colorado Alliance for Minority Participation was held on Thursday, December 12, 2002, in the Longs Peak Room of the Lory Student Center. Twenty-three scholarships were awarded to students from the Colleges of Engineering and Natural Sciences.

Also recognized at the luncheon were four student organizations American Indian Science and Engineering, National Society of Black Engineers and Scientists, Students as Leaders in Science and the Society of Hispanic Professional Engineers. These student organizations work hand in hand with the CSU CO-AMP site in providing professional opportunities such as attending conferences, workshops of interest to science and engineering students and mentoring/networking with professionals in their fields.



*Joe Robertson, Physics major, receiving his award from Dr. Omnia El-Hakim*



*TSJC Student Rovert Santistevan*

## TSJC Students Participate in Bighorn Relocation

*Ron Rankin – TSJC Faculty*

Ron Rankin, professor of biology at Trinidad State Junior College, and CO-AMP students Melanie Bernal and Rovert Santistevan helped Colorado Division of Wildlife staff members capture and relocate 18 bighorn sheep from the Rampart Range west of Colorado Springs to DeBeque Canyon, northeast of Grand Junction. Lured with alfalfa hay and apple mash, the sheep were captured in a net, blindfolded, hobbled, medicated, ear-tagged and loaded for transport. Three of the animals were fitted with radio collars.

The relocation project continues a 50-year-old DOW program to reestablish populations of Colorado's state animal. John Ellenberger, the Division's big game coordinator, estimates that more than 7,000 bighorn sheep now inhabit the state, a three-fold increase over the past three decades.

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## TRIO Talent Search Program Collaborates with CO-AMP

*Jennifer Pacheco, Talent Search Coordinator*



*Dr. Wade Troxell and Talent Search Students*

Recently The Center for Educational Access and Outreach had the pleasure of once again working with CO-AMP, the Colorado Alliance for Minority Participation, in our annual Educational Talent Search Technology Summit. One of five federally funded TRIO programs based at Colorado State University, Educational Talent Search (ETS) serves more than 1,000 low-income

and first-generation students from 26 middle schools and high schools in northern Colorado. The relationship between ETS and CO-AMP is a natural extension of the idea that, given the opportunity and encouragement, anyone with the drive can get into and succeed in college.

On Friday, March 7th, ETS brought 34 high school students to campus to explore future opportunities in a variety of technology fields, one of which was engineering. We'd like to thank CO-AMP and especially Ty Smith, Dr. Wade Troxell, Horizon Briggs, Seth Gregg and Dr. Omnia El-Hakim for making this year's Tech Summit as successful as in past years.

In addition to the Tech Summit, ETS and CO-AMP have teamed up for numerous visits and tours of the engineering facilities. Students have been exposed to robotics, pneumatics, sound wave labs, mechanical engineering projects, and general overviews of the engineering program at CSU.

The CO-AMP program has helped Educational Talent Search to bridge the technology gap for low-income and first-generation college bound students. While not all of our students will become engineers, we hope to have planted the seed that becoming an engineer is not only within their grasp, but is a field in which they can excel. Thank you CO-AMP for your support and outreach!

### Colorado School of Mines Prepares Students for Academic Success

*Lydia Muwanga, MEP  
Newsletter coordinator*

Challenging gifted and talented students, the Minority Engineering Program (MEP) at Colorado School of Mines (CSM) holds three summer programs annually: Summer Minority Engineering Training (SUMMET), Preparation for Engineering Program (PREP), and Challenge, two of which are directly supported with CO-AMP funding.

In SUMMET, high school juniors and seniors with a strong foundation in mathematics and science gear up for intense college coursework training in calculus, computer programming, technical writing, economics, and physics. A sister program to SUMMET, PREP caters to eighth and ninth graders whose academic strength also lie in mathematics and science. These students take classes in technical writing, computer programming, algebra II, trigonometry, biology, and physics. Challenge is designed for incoming college freshmen who hold high potential for success at CSM. These



*Participants in the 2002 Challenge*

students enroll in summer sessions of Introductory Topics for Calculus 1, Introductory to Chemistry, and a leadership course that prepares them for academic success.

In each program, promising students receive a hands-on experience into the engineering and science world, based on the theory presented to them in their class work. Students also participate in industry tours, various community and social development exercises and have the opportunity to interact with students from across the nation. The support of CO-AMP is critical to the outreach efforts of the MEP at CSM. Visit the following website to learn more about these exciting programs: [http://www.mines.edu/stu\\_life/mep](http://www.mines.edu/stu_life/mep)

### TSJC Students

(cont'd from front page)

The DeBeque Canyon area consists of approximately 53 square miles of excellent sheep habitat with steep, rugged tributary canyons located west and north of the Colorado River. Petroglyphs of bighorn sheep have been found in the canyon suggesting that it once supported a sizable sheep population.

Rankin is coordinating a bighorn sheep DNA research project with DOW and the University of Southern Colorado. The TSJC biologists obtained a blood sample from each of the 18 bighorns relocated to Debeque Canyon to determine the genetic diversity of the animals. The Bighorn Sheep Research Project will be presented at the Five State Regional Biology Conference in Salt Lake City, Utah in April.



## Students as Leaders in Science Active at Colorado State University

*Arlene Nededog, Director of Retention, College of Natural Sciences*



SLS Students at SACNAS conference

Students from Colorado State University's Students as Leaders in Science (SLS) student organization attended the Society for Advancement of Chicanos and Native Americans in Science (SACNAS), National Conference & K12 Teacher Workshops in Anaheim, California from September 26-29, 2002. According to SACNAS's web page, "their mission...is to encourage Chicano/Latino and Native American students to pursue graduate education and obtain the advanced degrees necessary for research careers and science teaching professions at all levels."

The nine students attended the conference sessions, networked with leading scientists from around the country and had the opportunity to participate in mentoring activities through out the conference.

### FLC Students

(cont'd from Page 1)

participants from the four corners areas and hosted 6 keynote speakers, FLC faculty, corporate visitors and 20 various workshops and activities provided by the AISES members. The conference was successful in providing a forum for recruitment and retention of Native American Students into the STEM fields at FLC.

Other involvement of the FLC CO-AMP includes the sponsorship of students in various student organizations including the Native American Honor Society and Wanbli Ota Organization. FLC CO-AMP also supported the "Project View" program held by IBM at which the CO-AMP/AISES students won the \$500 award this year for their participation!

Attending the student oral and poster presentations gave the SLS students insight into the research currently being done by their peers. Visiting the conference exhibitors, students were able to gather information about potential internship and graduate programs.

Upon returning to Colorado State University, the SLS organization invited other science students to learn about the opportunities that SACNAS has to offer. Internship and graduate school information was shared with the students. For the spring 2003 semester the SLS organization plans on showcasing the, "How to Apply to Graduate School Workshop" that was presented at SACNAS.

The Students as Leaders in Science student organization is currently planning on taking another group to SACNAS's 30th Anniversary Celebration conference, "30 Years at the Crossroads: Merging Disciplines and Advancing Diversity" in Albuquerque, New Mexico October 2-5, 2003. Since attending the conference many of the attendees are planning on submitting their research for an oral or poster presentation.

### Congratulations!

to James Temte for his recognition in this year's LSAMP magazine as the outstanding minority student researcher for Colorado! James is currently a senior at Fort Lewis College with a major in Cellular Molecular Biology.



### President Yates Receives Award

CSU president, Albert Yates, received this year's CSU minority distinguished service award for his commitment to enhancing diversity on campus. Yates will be retiring from his position as CSU President in the summer of 2003 but will remain as the Chancellor for the CSU system.

## USC CO-AMP Students Give Back to the Community

*Dr. Jane Fraser, Chair, Dept. of Engineering*

The University of Southern Colorado has a diverse group of CO-AMP students that have been actively engaged in developing leadership skills and making valuable contributions to the community over the course of the past year. USC CO-AMP students choose to participate in a leadership role or a community volunteer position in efforts to contribute to the community. In the fall of 2002, CO-AMP students, Eddie López, Albert Lucero, Danielle Muñoz, Joe Robles, Jose Segovia and Lisa Zúniga attended the October 2002 MAES conference in Anaheim.

Additionally, Josh Pacheco and Nicole Trinidad-Martinez volunteered their time by tutoring students at Risely Middle School. Jacob Rivera contributed his time and efforts by reading to and answering questions about college from 2<sup>nd</sup> and 3<sup>rd</sup> graders at Heaton School. Derek Moore was also involved in mentoring and volunteering by contributing time in a tutoring program at Pueblo School for Arts and Sciences.

Furthermore, students such as David Hernandez focused on developing and using leadership skills by being an officer in the student chapter of the Association of Information Technology Professionals. Ben Lújan concentrated on leadership as well by serving as an officer in the student chapter of the American Society of Mechanical Engineers. Brandon Martinez and Joseph Mondragon developed skills and knowledge by working collaboratively with a professor on research focused on space travel. Other unique contributions by USC CO-AMP students include Paul Long's participation as a coach at a local school and Farrell Tahe's service as an officer in the student chapter of the Association of General Contractors. These USC CO-AMP students have made invaluable contributions to their community as well as to the development of their own leadership skills.

## Letter from the Director

Dr. Omnia El-Hakim



Despite our current situation with economic set backs and budget challenges, our CO-AMP program is healthy and well supported by the National Science Foundation. We met with the NSF directors during the annual NSF directors' meeting, March 23-25. We learned from the director of NSF, Dr. Rita Colwell, that the national AMP program is continuing successfully and on the right track. The program prepares STEM students with Bachelor of Science degrees to enter the work force or to pursue graduate school for future faculty positions. We learned that the increase in the budget request for the AMP

program for next year has increased by 23%. The AMP program has demonstrated a great model that emphasizes quality education of outstanding baccalaureate recipients. This model can also be replicated among other entities to benefit all the students in the nation. The program's ideas and experiences can be shared among the higher education institutions to stimulate long-term sustainability.

How are we going to sustain the CO-AMP program after the NSF fund expires? Since it's inception, CO-AMP has built an infrastructure of invaluable programs and provided cultural change at the partner institutions. The institutional cultural change resulted in producing a number of faculty members that has been slowly but surely increasing over the years. Students appreciate the faculty involvement and the faculty enjoys being mentors to underrepresented students to enhance their professional development. In addition to having this pool of faculty that support and sustain the CO-AMP program's effort, we also have the department chairs and deans who are currently institutionalizing some of the CO-AMP program to benefit all of the students. The collaboration between CO-AMP programs and the advocacy offices is another key success to sustain the effort of CO-AMP model. Thank you for being an integral part of this worthwhile consortium.

Learn from yesterday, live for today, hope for tomorrow. The important thing is to not stop questioning.—Albert Einstein

### Upcoming 2003 Events

**May 27-July 25:** PEAKS Undergraduate Research Opportunity at CSU. See website for details: <http://lamar.colostate.edu/~agep>

**June 15-28:** Fort Lewis College Summer Science Camp. Contact Dar Gurr for more information: 970-247-7569

**Fall 2003:** University of Texas System LSAMP student research symposium to be held at South Padre Island, Texas



Knowledge to Go Places

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