edited by KAREN HOPKIN

Radio Program Teaches Kids About Science

It begins with a troubled phone call. A distraught Maude L'Amore, elephant trainer for the Singing Sisters Circus, is frantic because her pachyderms refuse to dance the polka. Enter the Kinetic City Super Crew. After a quick train ride from Washington, D.C. to Zimbabwe, the Crew discovers that L'Amore's elephants weren't lazy—they were just listening to other elephants at a nearby zoo.

Wait a minute. Dancing elephants? Train to Zimbabwe? What is this?

It's radio, of course. In four pilot programs developed by AAAS staff, the K.C. Super Crew uses scientific technique and technology to solve mysteries. The show promises to make learning about science as easy as turning on the radio.

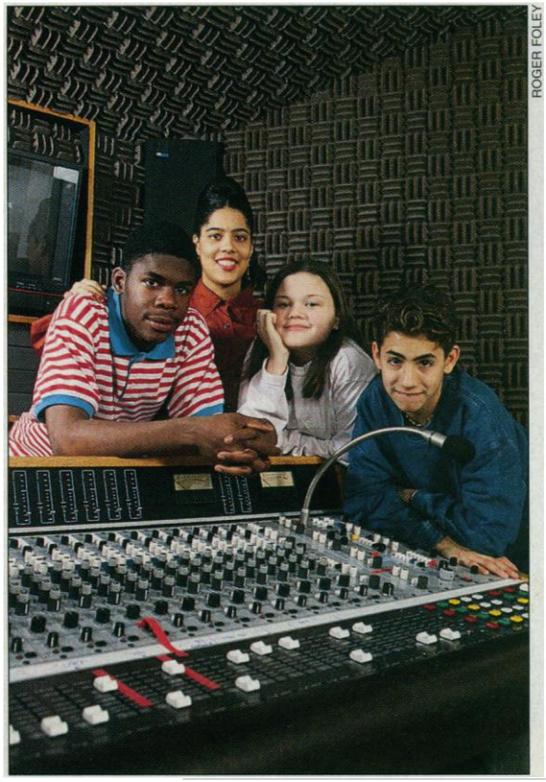
But polka-dancing elephants? That doesn't sound like science. "The meat of the show is a drama," says Super Crew executive producer Bob Hirshon. When he isn't searching for the perfect circus sounds, Hirshon produces and anchors Science Update, the Association's radio news show currently heard on Mutual Broadcasting stations nationwide.

"The dramas are fanciful, but based on real research," adds Super Crew producer John Keefe. In the case of the polka-challenged pachyderms, Cornell biologist Katy Payne's research on infrasound elephant communications provides the solution to L'Amore's oversized dilemma.

In addition to solving a science mystery, Keefe says that each show features an experiment that kids can perform at home, plus several short features related to the show's theme. Listeners will have an opportunity to call in with their questions, comments, or the results of their home experiments.

Geared toward children ages 8 through 10, the show will "stimulate kids' interest in science before they get socked with textbooks and turned off in school," says Keefe. The show is meant to entertain, adds Hirshon, adopting the motto from the *Fat Albert and the Cosby Kids* program: "If you're not careful, you might learn something."

On the whiteboard in Keefe's office, the titles of the four pilot programs are abbreviated: *seeds*, *sound*, *time*, and *garbage*. How can this bizarre list represent anything even vaguely scientific? In addition to dealing with low frequency elephant communication, the *sound* program features an *a cappella* group singing about frequency and amplitude, and a doctor that describes the functioning of the larynx. The Crew tracks down a malfunctioning atomic clock while learning about circadian rhythms in the episode on *time*. After learning about *seed* dispersal, the Crew saves a rain forest by foiling a diabolical plan to eradicate a species of seed-eating tropical bird. Finally, in *garbage*, the Crew learns about sewage treatment while trying to recover a prized trading card that an agitated adolescent suspects her kid brother flushed down the toilet.


ROGER FOLEY

Kinetic City Super Crew *(left to right)*: Alvin Perry, Chantel Fitzgerald, Annalee Gulley, and Joaquín Andrés

Although it might be hard to believe, these stories were actually written by adults—Julia Andrews and Susanne Stahley. Keefe, Hirshon, and members of the show's advisory board selected the topics after perusing curricula, textbooks, and information supplied by AAAS Project 2061. Of course they also consulted kids to determine what topics tickle their fancies.

The show's four stars range in age from 11 to 16 years old. They are an ethnically diverse urban group recruited from Washington, D.C. schools and theater groups.

Although not previously interested in science, Chantel Fitzgerald, 15, says that working on the show has given her "respect for scientists and a better understanding of what they're trying to do. Besides," she adds, "it's fun. Kind of like an adventure."

The youngest cast member, Annalee Gulley, predicts that kids will enjoy the show because "they won't be thinking *this is science*."

"Science in elementary school *was* pretty lame," recalls *Science* writer Ivan Amato. As one of the AAAS staff members serving as a sounding board for show ideas, Amato says that "the show is novel because it presents information in an alternative way—it isn't threatening or a drag." Better yet, he adds, listeners "don't have to take a test afterward."

But soon the Super Crew will be put to the test. The National Science Foundation provided $216,000 to produce and evaluate the pilot shows, which are scheduled to air on a new Washington, D.C.–area children's radio network this May. Beginning on 4 May, listeners can catch the four Super Crew pilots on Tuesdays at 4:30 pm. The station, called *The Radio Zone*, is on 1050 AM in Maryland and Washington, D.C.; 1460 AM in Virginia.

The show is taking advantage of a national trend, as the number of radio stations catering to kids under 12 is on the rise. Because many of the nation's 35 million children find themselves alone in the house while their parents work, tuning in to their favorite radio station can be both comforting and educational, says Friendship Company CEO Cate Smith. A founder of the national children's network *Radio Aahs*, she says that "kids really *do* listen to the radio, in extraordinary numbers."

The networks' task is "to be entertaining while communicating knowledge," says Smith. "We want to say to kids that learning is the most fun thing you can do."

Radio is the perfect venue for a program like the K.C. Super Crew, says Smith. As a medium, it is more interactive than television, encouraging kids to use their imagination and to do things, including home experiments, on their own. Because Smith has found kids very vocal in their response to radio broadcasts, she expects that assessing the show's impact should be just a matter of listening.

Hirshon agrees. "If it's a show about science and kids like it," he says, "I think that's good enough."

If the show proves successful, AAAS will seek corporate and NSF funding to produce 39 episodes per year.

Bridges of Science

Some 10,000 years ago, a narrow land bridge connected North America with the Russian Far East. While the Bering Strait is probably here to stay, American scientists plan to regenerate the intercontinental connection by meeting with their Russian colleagues at a regional conference on the Arctic and North Pacific in 1994.

This international conference, cosponsored by the AAAS Arctic and Pacific Divisions and the Far East Branch of the Russian Academy of Sciences, will promote the open exchange of ideas, information, and technology among scientists with an interest in the history, ecology, and sociology of this region.

Participants from Russia, Canada, and the United States will attend seminars, exhibits, and poster sessions in Anchorage, Alaska from 25 to 27 August 1994. Then 100 to 150 scientists will travel by chartered jet to Vladivostok, where the meeting continues from 29 August to 2 September. Located at the end of the trans-Siberian railway, Vladivostok is the seat of the Far East Branch of the Russian Academy of Sciences.

Investigators interested in the Arctic and North Pacific regions will address four general themes:

- natural resources and environmental changes;
- Beringia—recent discoveries and interpretations;
- development and adaptation of people and cultures; and
- communication and information exchange.

Following the conference, volcano-watchers and nature aficionados will have the opportunity to explore the Kamchatka peninsula, Lake Baikal, and Wrangell Island on guided field trips.

More than providing a forum for discussing the Beringian land bridge, the meeting will bridge scientists who formerly had little access to one another. Participants will make contacts, establish joint projects, and exchange data.

While the Russians will benefit from gaining access to Western technology, Arctic Division secretary Gunter Weller says that he looks forward to reviewing the "research facilities and the extensive data sets of this region hidden from Western eyes for many years."

Although Weller anticipates having to haul computers, copiers, telefax machines, and slide projectors to Vladivostok, he considers it a small price to pay for sharing Russian expertise in areas from climate modeling to anthropology.

With the help of the AAAS International Directorate, the Association's Divisions are raising funds to encourage young faculty members and students to travel to the meeting. Since the first circular was distributed in March, the organizers have received more than 100 requests for additional information about the conference. To receive a copy of this flyer, write to Conferences and Special Events, University of Alaska-Fairbanks, Fairbanks, AK 99775.

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Upcoming Division Meetings

Pacific Division

From 20 to 24 June, scientists will gather at the University of Montana in Missoula to discuss the future of wolves in the west, geological exploration of the Northern Rocky Mountains, Native American health issues, and much more.

The 74th Annual Meeting of the AAAS Pacific Division also offers a number of guided field trips that will lead participants across a bison range, through a local sapphire mine, and onto "Egg Mountain," an ancient dinosaur nesting ground.

Once again, students and postdocs are encouraged to take advantage of the employment exchange to get the latest information on job offerings in academia, government, and industry.

For more information, or to register for the meeting, write to the AAAS Pacific Division, California Academy of Sciences, Golden Gate Park, San Francisco, CA 94118.

SWARM Division

The 1993 AAAS Southwestern and Rocky Mountain Division Annual Meeting will focus on "The Importance of Diversity." Held at the University of New Mexico in Albuquerque, from 23 to 27 May, this conference offers sessions on semiconductors, alcoholism, global resource measurement, and innovative science education reform.

For registration or information, write to the AAAS SWARM Division, Colorado Mountain College, 215 Ninth Street, Glenwood Springs, CO 81601.

Student Research Awards

Nine undergraduates won prizes for their poster presentations at the AAAS Annual Meeting in February. These young scientists distinguished themselves by their exceptional research achievements in the fields of physical, social, and life sciences.

PHYSICAL SCIENCES

Tarek Abdel-Fattah of Northeastern University won first prize for the synthesis and study of compounds containing nickel/copper alloys encased in zeolite.

Second prize went to **Daniel de Oliveira** at the University of Massachusetts-Dartmouth for estimating protein secondary structure using the amide III region of Fourier transform infrared spectroscopy.

Frank Rybicki of Harvard-MIT Division of Health Sciences & Technology and **Alice Danielson** at the University of Alaska tied for third prize. Rybicki studied a novel ultrafast MRI technique, and Danielson examined the role of snow in antarctic sea growth.

SOCIAL SCIENCES

Sharoni Shafir of Stanford University won first place for her work supporting the comparative evaluation of foraging options by honeybees.

LIFE SCIENCES

Anthony DeMarco won first prize for examining the effect of visual flash intensity on the P300 response.

Second prize was shared by **Damon Hou** of the Howard Hughes Medical Institute-NIH Scholars Program for the characterization of T cell receptor ubiquitination; and **Ofer Levy** at the New York University School of Medicine for describing a novel family of antimicrobial leucocyte proteins.

Honorable mention went to **Bernadine Yuan** of Wellesley College for her study of ATP-sensitive potassium channel function in hypertrophied cardiac muscle cells.

Report on 1993 Council Meeting

Executive Officer Richard S. Nicholson presented his annual report on the state of the association. He explained the rationale behind the Board of Directors' decision to terminate the long-standing contract with an outside advertising sales organization and the creation of an in-house sales operation. It was reported that the financial results of that change were even more positive than expected. In the first year of operation, sales increased by almost 10% while there was a 50% reduction in costs associated with obtaining those sales.

Nicholson described the redesign/layout changes done by the *Science* art staff, as well as the changes to both the news and editorial sections of *Science*. He also discussed efforts to broaden the non–life sciences coverage of the journal. He then went on to describe the five-year plan that had been developed to increase both the amount of international coverage in the journal and the number of international members of AAAS. He announced that the association, as part of this five-year plan, was setting up an office in Cambridge, England.

Nicholson announced that AAAS recently had the opportunity to purchase land at a very favorable rate and was proceeding with plans to build a new headquarters building on the site.

In closing, Nicholson indicated that the AAAS continued to be on sound financial ground, that the membership was growing, that *Science* was prospering and the programmatic activities of the organization continued to grow and receive strong support from outside funders.

Division Report

Alan Leviton, executive director of the Pacific Division, gave an historical overview of the activities of all four of the AAAS divisions: the Arctic, the Caribbean, the Pacific, and the Southwestern and Rocky Mountain. He showed slides from each of the divisions' meetings and talked about the important outreach role they play for the individual regions they serve.

Presentation of *Science* Advertising Organization

Beth Rosner, associate publisher of *Science* and head of the *Science* Business Office, briefed the council members on the rationale for the organizational structure she had created when advertising sales were brought in-house, and explained her strategy for increasing advertising revenues in the future.

Rosner talked about the use of special issues to provide unique opportunities for advertisers and the importance of becoming more international in response to the increasingly international scope of product sales in a changing economic climate.

Project 2061 Benchmarks

F. James Rutherford, director of Project 2061—the association's long-range science and technology education project—discussed the status of Project 2061 and the educational benchmarks currently being developed during Phase II of the project. He described the benchmarks as recommendations for what students should know as they progress through school, a set of guidelines to organize a new system around. He indicated that before final release, the benchmarks were being reviewed by scientific societies, all the AAAS sections, state academies, the National Science Teachers Association, state and regional groups of K-12 teachers, and teachers' associations. Rutherford indicated that they expected to finalize and publish the benchmarks in the summer of 1993.

Presentation of Headquarters Building

Carl B. Amthor, the AAAS chief financial and administrative officer, gave a presentation of the evolving design concept for the new headquarters building. He indicated to the council that the Board-approved plan was to finance the cost of construction through the use of tax-exempt government issued bonds and gave the reasons behind the belief that the current economic conditions were ideal for initiating the project. Amthor described the architect selection process that had led to the selection of Harry Cobb of Pei, Cobb, Freed and Partners as the design architect and showed the preliminary design sketches. He reviewed the current schedule for completion of the building.

Items Presented by the Committee on Council Affairs

No resolutions were forwarded to the council for approval. The council did take action on the following items:

- Approval of both the American Water Resources Association and the Association for Women in Mathematics as new affiliates of AAAS.
- Approved proposed revisions to the Southwestern and Rocky Mountain Division's bylaws which served to extend the territories of the division by adding North Dakota, South Dakota, Coahuila and Nuevo Leon, Mexico and Saskatchewan and Manitoba, Canada. The approved revisions also change the process for electing officers from a mail ballot to an election by ballot of members attending the annual meeting of the division.
- Failed to approve a proposal for changes to the amendments and bylaws that would grant the council the authority to revoke fellowship status.
- Approved the formation of a task force to conduct a review of the current makeup of the 23 existing sections and determine whether they represent the most appropriate structure for the association for the future. In addition, the group will review the role and mission of sections and how they could more effectively serve the organization.
- Discussed the pros and cons of formal term limits for section secretaries who are appointed by the Section Steering Group. There was general agreement that it should be left to the discretion of the individual sections.

Resolution of Appreciation

The council unanimously approved the following resolution of appreciation on behalf of Michelle Balcomb, the retiring Executive Secretary of the SWARM Division:

Whereas, Dr. M. Michelle Balcomb, a member of long-standing of the American Association for the Advancement of Science, has served the association for more than fourteen years as Executive Secretary of the Southwestern and Rocky Mountain Division of AAAS, and

Whereas, her term was marked by several innovations, such as the "Community College Initiative" and the "Regional Fellows Forum", and

Whereas, she brought scientific members of the Native American communities into close contact with their peers throughout the SWARM Division, and

Whereas, she encouraged a close association of state academies of science with SWARM and active participation of teachers and students in association activities,

Therefore, be it resolved that the council of the American Association for the Advancement of Science at its annual meeting held in Boston, Massachusetts on the 15th day of February 1993, hereby expresses its profound appreciation to Dr. Balcomb for her outstanding service and contributions to the SWARM Division and to the mission and goals of AAAS.

–Gretchen Seiler